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MARYLAND

DEVOTED TO
AGRICULTURE, HORTICULTURE,



FARMER:

LIVE STOCK
and RURAL ECONOMY.

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Address of Col S. S. Bradford.

[Col. Bradford was a delegate from the Virginia State Agricultural Society to the Convention which was called by Agricultural Commissioner Loring to assemble in Washington in January last. We regret our space will not allow us to publish the address entire; in this issue, for we are sure it will be read with great interest, as the Colonel is a distinguished Virginia breeder of short wool sheep and Shorthorn cattle, and other improved breeds of stock.—EDS. MD. FAR.]

Mr. President:—I came in a few moments ago with not the remotest intention of engaging in discussion. Until the day before the convention met I did not expect to be able to attend it. I had for several weeks suffered with severe cold, and my head felt like an iceberg, and was as destitute of thought. I could, I believe, have as easily called up spirits from the vasty deep, as have drawn thence one iota of thought upon any subject. I came here not to speak, but to listen; not to teach, but to learn, and I am pleased to say that I have not come in vain. The essays that have been read and the discussions they have called forth have delighted and edified me. I have learned some important truths. Some of my previous opinions and practices are more confirmed and some I am made to doubt, and they demand of me further study, investigation and experiment.

Our final adjournment, Mr. President, draweth near; the time is short and I shall consume but little of it. It is my misfortune not to have heard the whole of the essay just read by Dr. Ellzey, and to have heard imperfectly the subsequent remarks by him and Colonel Beverly. I cannot take opposite ground to those very judi-

cious and practical gentlemen, without some measure of distrust of the strength and tenableness of my position. But my reason, experience, observation and what I learn from reading and from conversation with successful husbandmen are all adverse to the proposition that "shelter is not economical or essential in the Middle or Southern States for cattle and sheep," and that "the Shorthorn is, for all purposes, the best breed of cattle for the farmer." If I have not mistaken the teachings of a not very limited experience, a barn for the combined purposes of sheltering stock and storing forage, will, if judiciously managed, afford advantages fully equivalent to 25 per cent. interest on its cost.

In cold, dry climates shelter is economical chiefly in the conservation of the vital heat of the animal. If the animal is exposed to cold the waste of carbon (animal heat) is much greater, and a larger proportion of the food eaten daily is burnt up in the production and preservation of that heat than if in a condition of warmth and comfort, and in most sections of the country boards are cheaper than forage. All kinds of stock suffer more and lose more of flesh and growth by exposure to cold rains, than to a dry atmosphere of lower temperature; consequently, in the Middle States, where the winters are moderate but wet—good, clean, dry, well ventilated shelters are more essential to health and thrift than in the colder but dryer climates. Protection against winter's storms is beneficial to all classes of stock, but especially so to sheep. Their fleeces saturated with rain in winter, do not dry off under several days, and rainfalls at intervals of a few days keep them under the burden of a wet and heavy fleece nearly all winter, with effect upon their constitution not unlike that of wet clothes long worn by a human being.

Open shelters are less beneficial (and to sheep probably of no benefit) than closed ones, for the reason that when the wind confronts them they afford no protection, and the stock passing in and out of them, at will, during rainfall, carry into them a great deal of water, and renders it impracticable to keep them dry and clean—especially does this objection hold with sheep, and it were doubtless better that they bear the winter's storm than occupy filthy, damp, unventilated or crowded shelters—the most fruitful, perhaps, of all sources of disease; it is even more important that their sleeping floors and their feet be kept dry than their bodies. Dryness is a condition most favorable to their thrift, to the growth and heft of the fleece, the length, strength, uniformity of diameter and felting property of the fibre, and to its making a good, strong and durable fabric. In summer, when the wool is very short and quickly dried off by wind and sun, exposure to rain is less hurtful, but they should be carefully sheltered against the cold fall, winter and spring rains. A neglected sheep is an unprofitable animal. All good stock are profitable in proportion to the judicious care and attention they receive. In successful sheep husbandry, intelligent care is the first requisite; and the best season to care for them is from New Year to New Year. I am not prepared to advocate low, single story structures, unless made of poles and straw, or other inexpensive materials for shelters. I question the economy of a single story building for any purpose. The roof is the most expensive item in building, and the more room and accommodation secured under a roof of given dimensions, the more economical is the building as a whole. In providing shelter for stock I would have building 18 or 20 feet high; the ground floor, or first story, 8 feet pitch for stock, and the upper apartment for storing the supply of forage. This combination affords many conveniences and economies. Hay may be housed after one-fourth the exposure to sun and air that is necessary to safely stack it out, and if to avoid an approaching ruin or heavy dew, it is carried in little too soon, the curing process will go on quite as well in the barn. Hay that is little wilted by the sun and cured in the shade is more valuable than if longer exposed to sun and air. In drying, hay

loses in nutriment and in the property of assimilation by the animal. Green grass is the natural and best food for animals, and the more nearly we can preserve it in that state, the more palatable, nutritious and healthful it is. Two-thirds of the hay of the country is not grass cured or preserved, but grass bleached or killed. Stacked in open air it takes a longer drying or killing process than if housed, and however skillfully stacked, it becomes dry, hard and woody, and the whole surface depth of 6 to 12 inches blackened, half-rotted and worthless, and if not separated from the better portion, the stock invariably eat some of it to their serious detriment. To sheep especially nothing is more fatal than damaged, dusty hay. As soon as the hay crop is harvested in the barn, with opening in top to pass off any heated air, the windows should be closed and the air as effectually excluded as possible. When the feeding season arrives the forage is all at hand; no second handling or hauling and the whole is as fresh, bright, fragrant, palatable and nutritious as when stored there, to be conveniently placed in the racks below, where the stock receive it with avidity and with no loss compared with the wasteful method of feeding it in the field in all conditions of the land and weather. By frequent littering of the floor with straw, leaves or other material suitable for the cleanliness, comfort and health of the stock, with occasional dusting with plaster and ground phosphate, the chemical constituents of the excrements of the animal (that would be largely wasted on the cold field) are all preserved and a large quantity of the most valuable manure secured, which by the coming fall will be well decomposed and dry for convenient and uniform application to the soil, preparatory to wheat seeding, and to that extent at least, the farmer be spared the prodigal outlay for commercial nitrogen at the rate of \$500 to \$600 a ton, for which he is rarely if ever reimbursed. The manure heap is the farmer's savings bank, into which, if he makes proper deposits his drafts will never be dishonored. Is it a vain conception Mr. President, that a building combining these advantages will, properly used, afford an annual interest of 25 per cent. on its cost? It is mainly in reference to farms of 500 to 1,000 acres or less, that these reckonings are made. I have in contemplation the

average and smaller farmers, the agricultural masses, the "the vulgar herd of farmers,"—as they are sometimes satanically named, of which class I am an humble type. On large bodies of land, with "cattle on a thousand hills," without a corresponding hay crop to house, the winter forage, consisting of straw and corn not stripped from the stalk, it would be more convenient, certainly, and probably more economical to carry it to an adjoining field for cattle, followed by an adequate number of hogs to gather up the waste and offal; and my friend, Col. Beverly, is wise, I've no doubt in pursuing that policy, as he is in all his business methods. "The lines have indeed fallen unto him in pleasant places; he has a goodly inheritance." His *thirteen hundred cattle* feed upon broad fields of blue grass, so densely soddled that the hoof of a bullock of 1,000 pounds, after a week's rain makes no more impression upon them than does the delicately slipped foot of his accomplished daughter on his Turkey carpets.

[To be continued.]

Farm Work for September.

The first month of autumn is an important period of the year for farmers. Now is the time when they gather some crops, secure others for future operation in preparing them for market, and also the time to lay a foundation for yield of others in the coming year. Tobacco is to be housed, corn cut off and put in shocks; land cleared of weeds and briars and fallowed for wheat, &c. Farmers should determine to do well whatever work they have to do in regard to the seeding of their grain crops.

Tobacco.

Secure the tobacco as fast as it ripens, and see that Jack Frost does not surprise them. In regard to the management of this crop we now merely call attention to our views as expressed heretofore.

Corn.

Secure a supply of well cured fodder, either by pulling the blades and cutting the crops, or by cutting off the stalks at the ground, let them lay a day to wilt, and then setting up in small shocks, tying with straw rope or small succor corn, the shock near the top to prevent its being blown down.

Corn may be safely cut as soon as the grain is

free from milk and too hard for roasting ears.—The stalks are then succulent and the blades green. Next winter it will be fine food for horses and cattle, fed whole, but if the stalks, blades and shucks are passed through the cutter and crusher combined, which are to be had of any large dealer in agricultural machinery, and moistened with warm water and sprinkled with meal bran or shorts, and a little salt, it will be found for mules and cattle to be as good or better than clover hay. It is superior food for milch cows. It would be better, however, if it was steamed, then it would be good also for horses and hogs. Properly managed, corn fodder is worth more to the farmer than the grain itself. It is therefore important that it should be saved in time, and afterwards taken care of, so that its value as food be not impaired or rendered totally worthless by bad management.

Rye.

If not already sown it should be done as soon as possible; the earlier rye is sown the better the crop and the less seed it requires. When sown it should be neatly and thoroughly put in and clover and timothy sown with it. No crop returns more for pains taken in its seeding than rye, and no grain crop is usually so carelessly and slovenly sown. If it be worth sowing it surely is worthy of being carefully sown. We believe if the same care was taken in the preparation of land for this crop as is taken for wheat, and it was sown on equally good land, and fertilized as we do wheat, on most farms it would pay better than wheat. Rye straw, threshed with the flail and rebundled, sells as high, nearly, as timothy. When baled it is worth \$15 per ton. We, however, are not advocates for the crop to supersede wheat, we only say, if it be sown, it is wrong to pursue the old, slovenly way, and recommend that this grass be sown with the same care and expense in fertilizers and work as is expended on the wheat crop.

Wheat.

We are advocates of early sowing of this crop. From the 20th of September to the 15th of October is a good time, and it gives a long interval for the farmer to get in his wheat in a farmer-like and thorough manner. For various reasons which have been so often assigned, (we deem it useless to recount them now,) we say plow your land deep, or subsoil after a four inch deep furrow slice of turf; lap the furrows well, harrow as fast as it is plowed; keep the land loose and clean by the *Smoothing Harrow*. Drill in five or six pecks of wheat per acre, with 200 pounds of

any fertilizer rich in phosphatic matter, or pure, fine ground bone; over the whole broadcast one bushel of salt mixed with two of plaster, per acre. Many, indeed a great many intelligent farmers in this country, find that it is more economical and equally good for wheat, that the fertilizer should not be nitrogenized, and therefore use per acre 200 pounds of S. C. Rock, simply dissolved with acid, and 100 lbs. of Kainit, the two well mixed and costs less than half what the best ammoniated fertilizer sells for. The seed should be good, plump, heavy grain which had been cleaned of all small grains, cockle, onion and all other impurities by the *Montgomery Screen*. Soak the seed in brine and roll it dry in plaster or slaked lime. If you have no good seed wheat of your own, buy such from those who have, or send as far north as you can to get good seed. We are of those who believe in a change of seeds and that cereals are best when taken from a northern locality or from Europe. The once popular wheats have certainly deteriorated in size of grain, weight and productive ness. The loss is immense which yearly proceeds from inattention to the character of the grain that is sown, and a still greater amount might be gained if every farmer would do his best to save and sow annually a few bushels of picked, selected wheat, with a view of improving the seed, or obtaining a new variety looking to increased productiveness, weight, color and qualities adapted to the manufacture of the whitest and best flour. An effort in this direction on the part of our intelligent farmers would essentially aid agricultural progress and increase individual wealth.

Fences and Ditches.

See that your fences are in good order, that your crops may not be trespassed upon, and your stock at this time do not contract the habit of fence-breaching. Ditches ought to be cleaned off and opened, and new ones dug where required.

Briars and Bushes.

Destroy briars and weeds and clean the fences of bushes, after being dried, burn up, or haul all in the barn yard in a green state, with some of the turf from fence corners and ditch banks.

Potatoes and Turnips.

Keep potatoes and turnips free of grass and weeds.

Cider.

You may begin cider making this month. The fallen fruit and early apples make very good ci-

der for vinegar, which sells as high as good drinking cider. There is much waste on all farms having orchards, and that waste of fruit ought to be avoided, and converted into meat or drink, even if extra labor is to be hired to accomplish it.

Roads.

Repair, straighten, and make all necessary new roads on the farm, and make them firm and well drained as possible. If time and opportunity allow, assist the Road Supervisor in mending the bad places and in grading the hills on the public roads near your farm. Good roads are invaluable, and raise the price of lands in every neighborhood where they are to be found.

Top-Dressing for Meadows.

Two bushels of refuse salt, two of plaster and four bushels of fine ground bone dust, well mixed together and sown broadcast over the meadows, per acre. If there are thin places sow grass seed on them, harrow well, and give a double dressing of manure. After harrowing; roll. Keep the stock off, or graze your meadows but little if you wish a good yield of grass next year.

Orchards.

If you intend to plant an orchard, the ground selected for this purpose should this month be deeply plowed and sub-soiled, and pulverized by frequent harrowing; lay off the land with the plow, or by tape line and stakes, dig the holes three feet in diameter and two feet deep; work in the bottom of the holes a half bushel of one part leached ashes or bone dust, one part well-rotted manure, and fourteen parts of wood's earth or rotted turf and mold. The quidecunx form or five in a square, one being placed in the centre of the square, is the best way to plant an orchard. Then the trees can be worked on every side and the land kept level. It is every way desirable. Apples and cherries should be planted forty feet apart; peaches twenty, and plums or quinces ten or fifteen feet, dwarf trees eight feet. In setting out an apple orchard it is a good plan to plant peach trees between each apple tree, as they will be out of the way before the apple trees will want their room. We will not lose this opportunity to impress our readers with the great importance of having a good orchard of well selected, choice fruits of the different sorts, ripening in regular succession. Cherries, peaches, plums, apricots, pears, apples and quinces are all valuable luxuries, "after their kind," and indispensable to the health and comfort of a family, and without them no farm is

complete in its appointments. Let us warn you against tree pedlars; some of them are imposters, and none are as reliable as the first-class nurseryman, from whom alone you ought to buy, because you get the trees cheaper and you have a guarantee that you get what you buy. These tree pedlars or agents selling fruit trees, with their brightly colored fruit pictures, have done incalculable mischief in our southern country particularly, and yet intelligent gentlemen are daily found buying of them largely. We would also recommend our farmers to buy of our nurserymen near home, where the trees are acclimated and grown on soil similar to where they are to be transplanted, and from men who know the sorts of fruits best adapted to our soils and climate, rather than send off a thousand miles for the same article grown on different soil and used to a different climate, when it can be had at our doors, and can be seen bearing if we choose to visit the nursery.

Garden Work for September.

Our suggestions, it will be borne in mind, refer in most all cases to the early part of this month. The first thing is to clear the garden of all weeds and grass, and get in well-rotted manure, for the beds to be immediately put in order for seeds or plants.

Gathering Seeds.—As they ripen, gather the seeds and dry them on cloths or boards. Save only the best from the choicest sorts.

Herbs—All herbs may be transplanted in moist weather.

Celery.—Earth up celery for blanching. If dry apply liquid manure made brackish. Be sure to earth up only when the ground is dry and the plants are free from dew.

Small Salading—Of all kinds may now be sown for fall use.

Endive.—Plant endive, and tie up or cover with earthen pots those plants which have reached the full growth.

Turnips.—A bed of turnips may now be sown if the ground is rich.

Siberian Kale.—Prepare a dry, rich bed, rake it well, sow kale as thick as you sow turnips. Rake in the seed then tramp or roll.

Spinach.—Work the growing plants and drill more seed for spring use. The bed ought to be spaded deep, very highly manured, and seed sown thin in the drills, a foot between drills; cover an inch deep. When the plants come up, thin to four inches apart. Protect the plants

after frost sets in, with a thin covering of brush. After the last working in October, mulch between the rows with coarse stable manure.

Radish.—Sow radish seed; the ground cannot be too rich. Best sorts for autumn and winter are the Spanish and the Chinese sorts. When frost sets in they can be taken up and preserved like turnips, or placed in a barrel with dry sand between the layers, sink the barrel in the ground and heap straw on the head of the barrel, when they are accessible at any time of winter. The *Rose Colored Chinese* is the best winter radish we have. The only proper soil for this popular edible is a rich, light, sandy loam.

Cabbage.—Sow a small bed of the Early York cabbage, and one of the famous Jesey Wakefield, for planting this fall and next spring.

Cauliflower and Broccoli.—Keep these delicious vegetables well worked, and in dry weather, water copiously every evening. Sow seeds of cauliflower for transplanting into cold frames to stand over winter.

Gooseberries, Currants and Raspberries.—Plantations of these should be made early this month on good soil, three feet apart, well watered, if a dry spell, and mulched with long manure from the stable.

Strawberries.—Work the beds, and keep the runners of strawberries cut close. Plant new beds.—The ground should be well drained, rich and friable. Set the plants 15 to 20 inches apart. Water, if necessary, until they take root and are growing; keep the beds well stirred with the hoe and rake until November, then fill the places between the plants with straw, leaves or corn-stalks, and poles or brush laid across to keep the leaves or straw from blowing away. On a small scale the best mulch would be leaves, and they kept in place by a sufficient covering of rich woods' mould saturated with brine or soapsuds. It would then remain undisturbed by the winds, and next spring be in condition to be worked in the soil as a coating of manure. Our friends cannot go astray in planting any of the most approved sorts. A small space of ground devoted to strawberries, if properly attended to, will yield an abundance for a family. Every plant or hill may safely be estimated to yield a pint during the season, so that each one can calculate the number of plants he would require for his family supply. One hundred plants would certainly yield an average of two quarts per day for three weeks. Who, then, that loves to see his household enjoy the luxury of wholesome fruit will hesitate to plant and properly take care of only 100 strawberry plants.

State and Independent Fairs, 1883.

STATE.

Colorado, Denver.....	July 17 to Sept. 30
Nebraska, Omaha.....	Sept. 10, 15
Montana, Helena.....	Sept. 3, 8
California.....	Sept. 10, 15
Maryland, Baltimore.....	Oct. 29 Nov 2
Virginia, Richmond.....	Oct 31, Nov 2
West Virginia, Wheeling.....	Sept 10, 15
North Carolina, Raleigh.....	Oct 15, 20
South Carolina, Columbia.....	Nov 13 16
Kentucky, Lexington.....	Aug 28 Sept 1
Mississippi, Meriden.....	Oct 29 Nov 3
Arkansas, Little Rock.....	Oct 16, 20
Texas, Austin.....	Oct 16, 10
Ontario, Toronto.....	Sept 11, 22
Nova Scotia, Truro.....	Sept 25, Oct 1
Maine, Lewiston.....	Sept 17, 22
New Hampshire, Manchester.....	Sept 3, 8
Connecticut, Meriden.....	Sept 17, 22
Rhode Island, Providence.....	Sept 25, 28
Vermont, Burlington.....	Sept 10, 15
New Jersey, Waverly.....	Sept 17, 23
Delaware, Dover.....	Sept 24 29
Ohio, Columbus.....	Sept 3, 8
Michigan, Detroit.....	Sept 17, 22
Indiana, Indianapolis.....	Sept 24, 29
Illinois, Chicago.....	Sept 24, 29
Wisconsin, Madison.....	Sept 3, 8
Minnesota, Owatonna.....	Sept 3, 8
Iowa, Des Moines.....	Aug 31, Sept 7
Missouri, St. Louis.....	Oct 1, 8
Kansas, Topeka.....	Sept 10, 15

INDEPENDENT AND DISTRICT.

American Institute, New York....	Oct 3, Dec 1
New England, Manchester, N. H.....	Sept 3, 8
Louisville Exposition, Louisville, Ky.....	Aug 1, Nov 10
Pittsburgh Exposition, Pittsburgh, Pa.....	Sept 6, Oct. 13
Inter-State Exposition, St. Joseph's, Mo.....	Sept 3, 8
District Fair Ass'n, Carbondale, Ill.....	Oct 8, 12
Western Michigan, Grand Rapids.....	Sept 24, 28
North-Eastern, Indiana, Waterloo, Ind.....	Oct 1, 5
Fat Cattle Show, Chicago, Ill.....	Nov 14, 22
Tri-State, Toledo.....	Sept 10, 11, 12, 13, 14
West Virginia Central Agricultural and Mechanical, Clarksburg.....	Sept 18, 20
Dominion Exposition, St. Johns, N. B.....	Oct 2, 7

MARYLAND COUNTY FAIRS.

Baltimore, Timonium.....	Sept. 3, 8
Cecil, Elkton.....	Oct. 2, 5
Frederick, Fredertck.....	Oct. 9, 12
Harford, Bel Air.....	Oct. 9, 12
Montgomery, Rockville.....	Oct. 9, 12
Kent, Worton.....	Sept. 11, 13
Washington, Hagerstown.....	Oct. 16, 19

VIRGINIA COUNTY FAIRS.

Piedmont, Culpeper.....	Sept. 11, 13
Lynchburg, Lynchburg.....	Oct. 24, 26
S. West Va., Wytheville.....	Oct 3, 5
W. Va. Central, Clarksburg.....	Sept. 18, 20

Flies and Bugs.

Flies, roaches, ants, bedbugs, rats, mice, gophers chipmunks cleared out by "Rough on Rats," 15c

The Profits of Farming.

Twenty per cent. is a small return for money invested in a farm and stock; \$200 for \$1,000 or \$2,000 for \$10,000 is a very common income from a well-conducted farm, and there are abundant opportunities for doing better than that. Many a farmer has gone West and has bought land there which has paid him 100 per cent. for several years. Hop-growing, fruit-growing, poultrymen, bee-keepers, and even dairymen sometimes make 100 per cent. profit, and rarely less than 25 or 30 per cent. Let a farmer sell his farm for \$10,000 and put in a 20 per cent. mine, and get \$2,000 a year income. He rents a house, buys his provisions and his fuel, hires a horse or carriage when he wants to go out, and at the end of the year he will find his income quite insufficient to keep him in the comfort he enjoyed on the farm, while at the time the mine is being worked out, and some day he is told "the bottom has fell out of it," and he finds all his money has fallen out with the bottom of his mine. No certain, sure and permanent investment can be expected to pay more than 5 per cent. now-a-days, and all above that has proportionate element of risk in it. But what risk is there about a farm that is free from debt? The bottom never falls out of that, and one may securely enjoy it as long as he lives, and leave it to his children, knowing that a thousand years hence the soil will still be returning its generous dividends.—*New York Herald.*

Crops for 1883.

THE Department of Agriculture reports the average yield of oats as higher than last year or 1879, and the aggregate product as nearly as large as wheat—about 480,000,000 bushels. Rye, averaged from the state returns, is fourteen and seven-tenths bushels per acre, making a crop of 20,000,000 bushels—nearly the same as in 1880. The indicated average yield of barley is about twenty-three bushels per acre, aggregating 45,000,000 bushels. Buckwheat is good for an average product of from 11,000,000 to 12,000,000 bushels. Pennsylvania produces nearly half of the crop. The returns indicate a probable average potato yield of eighty bushels per acre.—*Western Tobacco Journal.*

**An Interesting Letter from "Throp" about
the Manufactures of Fall River.**

WONDERFUL STATISTICS SHOWING WHAT STRIDES
CAPITAL IS MAKING IN THE NORTH, &C.

FALL RIVER, MASS., July 28-'83.

Editors Maryland Farmer:

GENTLEMEN:—By the above heading you will see that I am in the great manufacturing city of Fall River, and as I am myself surprised at the magnitude of its manufacturing interests, I doubt not that many of your readers, and possibly you, yourselves will be equally surprised when you see the figures which I shall give as accurately as I can hurriedly collect them.

Fall river is compactly built and rises somewhat abruptly from the eastern shore of Mount Hope Bay, an arm of Narragansett Bay. It was incorporated in 1803. Its name was afterwards changed to Troy but in 1834 was changed back to its old name. Its Indian name was "Queque-teant," meaning "place of falling water," and the river was named the "Queque-chau," signifying "falling water" or "quick running water."

Its growth in the past ten years has been phenomenal. According to the census reports its population in 1873 was 38,000, and at present it is 55,000. The great interests of Fall River are centred in its cotton mills, of which the city seems to be made up.

The number of incorporated companies for the manufacture of cotton goods is now thirty-six, owning fifty-three mills with an incorporated capital of \$16,738,000, but a probable investment of \$35,000,000, containing 1,678,016 spindles, and 39,297 looms.

The latest statistics report the total number of mills in the United States as 751, containing 229,156 looms, and 10,678,516 spindles, manufacturing 715,000,000 yards of print cloths per annum. Of these, New England has 438 mills, containing 186,374 looms and 8,619,334 spindles, manufacturing 588,000,000 yards of print cloths. Fall River has thus over one-seventh of all the spindles in the country, and nearly one-fifth of those in New England, and manufactures over *three-fifths* of all the print cloths.

The following is a summary of the manufacturing statistics of Fall River, Mass., January, 1882.

No. of Corporations,	-	-	-	36
Capital Stock (Incorporated)	-	-	-	\$16,738,000
No. of Mills	-	-	-	53
No. of Spindles	-	-	-	1,678,016
No. of Looms	-	-	-	39,297
No. of Employees	-	-	-	18,135
Pay Roll per week	-	-	-	\$113,000
Weekly Production—pieces	-	-	-	169,000
Yards of Cloth per annum	-	-	-	467,250,000
Bales of Cotton per annum	-	-	-	194,650
No. of Water Wheels	-	-	-	10
No. of Steam Engines	-	-	-	94
Total Horse Power, (W. Wheels, 1,645 H. P.)	-	-	-	28,120
Tons of Coal per annum	-	-	-	139,000
Gallons of Oil per annum	-	-	-	151,900
Lbs. of Starch per annum	-	-	-	2,168,000

Through the kindness of our host, Mr. W. H. Chace, of this city, we yesterday visited the Crescent Cotton Mill, the American Print Works and the Fall River Bleachery, and thus saw the whole operation; first, the cotton taken right from the bale as it arrives here from the South, then in its various stages of manufacture till we saw the finished unbleached muslin. At the bleachery we saw mile after mile of this muslin being bleached to a pearly whiteness, and at the print works we saw the goods being printed, and calicos of every shade being finished, boxed and shipped for next winter's wear. It was a wonderful sight and one of which I should like to give details, but dare not intrude too far on your always crowded columns.

Another important and interesting feature which I must mention is the manufacture of leather belting, without which the mills would be as a watch without a main spring. Our friend Chace, as you are aware is, a manufacturer of this article, and from him I learn that to run a cotton mill requires from five to twenty-five miles of belting, varying in width from one to forty-two inches, and costing from five thousand to twenty thousand dollars. Mr. Chace has now orders for belting three new mills, one of which is in this city and amounting to about seven miles; one in South Carolina of five miles, and one in Shanghai, China, of about six miles.

The Shanghai mill is the first ever built in China and is an experiment at the expense of the Chinese Government, and Mr. C. feels justly proud of the order. I have seen their belting made, watching closely every operation, from the arrival of the hides (many of which come from Baltimore,) to the shipping of the rolls of belting, and I can appreciate why the belt-

ing of the Union Belt Company stands at the head of the list for strength, durability and finish.

We leave here on Monday for Martha's Vineyard, where there is sufficient material for a long letter every day in the week, but this I will not promise. I will, however, if possible, endeavor to write you at least a short letter from there. With kind regards and trusting that you will remain well during the hot weather, I am

Yours very truly,

THROP.

A Cheap Filter.

The *Popular Science Monthly* gives the following directions: "Very many families desire some inexpensive device for filtering rain and other waters to be used for cooking and table use. A cheap and very efficient filter may be made by using a spirit or wine cask, placing it on end, with the head removed, and having a faucet at the bottom to draw off the clear water. To fit it for a filter, take the removed top head of the cask, and with a small bit bore holes all over it, then place four clean bricks or blocks of wood on the bottom, and on these rest the perforated top. Now fill upon it about four inches of charcoal chopped into small bits the size of peas, and over this place a layer of clean sand, six inches deep. Impure water poured into the cask on top of the sand, will become clear and sparkling after a little while, or as soon as all fine particles are worked out of the charcoal and sand. This filter will not need renewing oftener than once in two or three months."

A Good Agricultural Creed.

According to the *Canada Farmer*, the agriculturists of Canada met in convention and adopted for themselves the following creed: "We believe in small farms and thorough cultivation; we believe that the soil lives to eat as well as the owner, and ought, therefore, to be well manured; we believe in going to the bottom of things, and therefore, deep plowing, and enough of it, all the better if it be a subsoil plow; we believe in large crops which leave the land better than they found it, making both the farm and farmer rich at once; we believe that every farm should own a good farmer; we believe that the fertilizer of any

soil is a spirit of industry, enterprise and intelligence; without these, lime gypsum and guano would be of little use; we believe in good fences, good farm houses, good orchards, and good children enough to gather the fruit; we believe in a clean kitchen, a neat wife in it, a clean cupboard, a clean dairy, and a clean conscience; we believe that to ask a man's advice is not stooping, but of much benefit; we believe that to keep a place for everything, and everything in its place, saves many a step and is pretty sure to lead to good tools and to keeping them in order; we believe that kindness to stock, like good shelter, is saving of fodder; we believe that it is a good thing to keep an eye on experiments, and note all good and bad; we believe that it is a good rule to sell grain when it is ready; we believe in producing the best butter and cheese, and marketing it when it is ready."

Land Plaster or Gypsum.

The *Farmers' Union* says: "It appears from an experiment made by the State Agricultural College of Michigan, on their farm with sowing land plaster on grass, that two bushels of plaster produced over two-thirds as much increase as twenty loads of horse manure, worth ten times as much as the plaster cost. From this experiment it must, however, be inferred that the same results would be forthcoming on all soils for similar application, for all lands are not equally benefited by the application of plaster, though, as a rule, plaster fields can be made to produce luxuriant grasses by its use. So far as we know, where plaster has been tried in Minnesota, on grass lands and meadows, its effect was surprising. The only instance brought to our attention, however, was the application on sandy land."

[It will not act on some few soils, but it has wonderful effect on all broad leaved grasses and plants, as we know in Maryland when they are grown upon either heavy or light sandy soils, with here and there an exception of wet, iron-ore soils. On such it seems to have no efficacy. We look upon it as the cheapest and best mineral help that can be given to clover, peas, or beans, &c.—EDS. MD. FAR.]

Feeding Value of Ensilage.

EXPERIMENTS AT THE NEBRASKA STATE
AGRICULTURAL COLLEGE.

For the purpose of testing the ensilage of green corn compared with our other cheap foods as hay, millet, etc., a silo was made at the college farm the past summer. There was put into the silo sixty tons, by weight, of green corn stalks. The corn was taken when the grains were nearly half formed on the ears. The amount obtained from an acre was 16 tons, or three and three-fourths acres to fill the silo. The ensilage was fed to fattening steers and milk cows. Of a lot of steers, sixteen in number, obtained to be fed, two were taken to be fed upon corn and hay, the remainder, corn and ensilage. The two selected for corn and hay were considerably above the average of the lot. The most of the steers were three coming four years of age. There were four of the lot two years coming three. The older steers however, made the best gains.

The weight of the two hay fed steers when feeding commenced, 2,760 pounds; of the 14 fed ensilage, 16,630 pounds. The two steers were put on full feed the 25th of October; the ensilage steers were put on full feed the 11th of November. They received some corn fodder for roughness up to December 2. At this date the silo was opened, and feeding commenced. The ensilage apparently kept in good condition. It was not as palatable on top as a little deeper. At first but few of them would eat it, but it did not take them long to learn to eat it, as they ate ten bushels of it the second day. It was fed to them at noon each day, in same trough that the corn was fed from.

They were fed the ordinary way, getting all the corn that they would eat clean and all the ensilage. The same with those fed on corn and hay. The two steers had shelter when they wanted it. Eight of the ensilage steers had no shelter from above, and six of them had shelter from the 1st of January.

They were all weighed on Christmas day. Average gain of hay-fed, 150 lbs. each; of ensilage, 185

Weighed January 27, average gain of hay-fed, 75 pounds; ensilage, 58 pounds.

This was a very cold month, with cattle exposed to some extent.

Next weighing, February 27, average gain of hay-fed, 32½, ensilage fed 73½ lbs.

Next weight, March 27. Hay-fed, average gain, 55 pounds; ensilage-fed, 69 lbs. At this point the two that were fed hay and corn received meal instead of corn.

The next weighing was April 27, average gain of the hay and meal-fed, 57½ pounds; ensilage a little over 13 pounds.

Average gain May 25, of the hay and meal fed, 15 pounds; ensilage, 21 pounds average.

The total weight of hay-fed steers on May 25, was 3,470, making an average gain of 355 pounds each.

The total weight of ensilage steers, 22,495, making an average gain of 419 lbs. each.

Average gain for each steer of ensilage-fed over hay-fed, 64 pounds.

The probable reason why the steers did not gain more when warm weather commenced, was because they were already fat. They were already in good butcher's condition when taken off the grass, and adding the above amount, brought them through in excellent shape.

From the above it will be noticed that the ensilage-fed steers came out 64 pounds ahead, when they had the disadvantage both in the steers themselves, and the protection during the winter.

Considering all points it may be desirable to know what we think of the ensilage. I can say that we think well of it. It is a cheaper feed than prairie hay.

The ensilage from three and three-fourths acres gave the fourteen steers and two cows all the roughness they wanted, and had about ten tons left. It is unnecessary to give particulars here as they were given in the *Farmer* last winter.

The effect on feeding milk cows was also good. There were two cows fed all the time with it and corn. The milk and butter was good in quality and quantity, and still continues so at this writing.

There were two cows fed for a time on hay and meal, then on ensilage and meal.

Without giving details, the following is the result: One of the cows did not eat ensilage well and lost nine per cent in quantity of milk; the other gained sixty-one per cent. This was with just half of the meal that they received when fed on

hay. The effect on butter was for hay and meal feed, 33 pounds of milk to one pound of butter; with ensilage, 29 15-37 pounds. From this it will be seen that with half the quantity of meal, the ensilage feed gives a quantity of milk and more cream on the same quantity.

For any particulars that may not be shown here, you may write to H. Culbertson.—*Nebraska Farmer*

ENSILAGE.

John J. Thomas, the veteran agriculturist, of Union Springs, N. Y., and one of the editors of the *Country Gentleman*, says: "From observation and personal experience, I think the preservation of corn fodder in silos will be largely adopted by skilful farmers. It has several advantages, namely; 1, comparatively small space required for storing a given amount; 2, the greater ease with which the fodder may be cut short while soft and green; 3, avoiding the labor and risk of curing in shocks in the field; 4, the readiness with which the stalks may be harvested in all weathers except pouring rains; 5, the whole of the stalks being eaten by the cattle, and the advantages of green or succulent food through winter; 6, increase in the flow of milk some ten or twelve per cent."

Something Novel in Agricultural Fairs.

The *Hagerstown Mail*, speaking of the Washington County Fair to be held in Hagerstown on October 16, 17, 18 and 19 has the following:

"The managers of the Agricultural and Mechanical Association, during the holding of their exhibition last year, set on foot a movement designed to make their annual exhibitions the place for those having blooded or registered stock to sell to meet buyers for the same. The advantage of such a movement would enable purchasers to avoid the expense and loss of time they are subjected to in traveling over the county to find such stock as they are seeking to purchase, while the sellers would find many buyers they would not otherwise see. In other words, it would be an annual combination of sellers, breeders and exhibitors of all kinds of registered, thor-

oughbred or blooded stock, that must attract the attention of buyers as well as others interested in such a business and established the exhibitions of the Association as the place to buy and sell stock.

The gentlemen who are heartily aiding in this matter comprise some of the most prominent and influential breeders in the States of Pennsylvania, Virginia and Maryland. Since this movement has assumed definite shape, with every prospect of being a success, it has been proposed that the manufacturers of first class farm machinery be booked for the combination sale. The managers accepted this proposition, and also passed the following:

Ordered, That owing to the difficulty in procuring competent and unprejudiced judges this Association will not make any awards on farm implements or machinery.

The following was also passed:—

Ordered, That an advisory board of managers for the year 1883, composed of gentlemen not residents of this county, and heretofore manifesting an interest in our Association, be appointed from the manufacturers of farm machinery and breeders of live stock, and that said members be invited to make suggestions and to meet with the Board of Managers and participate in their meetings.

In pursuance of this order the following were appointed members of the Advisory Board of Managers of the Washington County Agricultural and Mechanical Association:

B. F. Newcomer, T. Alex. Seth, W. H. Whitridge, Andrew Banks, Lewis Ripple, G. S. Watts, Ezra Whitman, John G. Clark, Edward Jackson, John E. Phillips, John O. Ripple, Frank Brown and Jesse Tyson, of Baltimore.

F. Von Kapff, E. G. Merryman and Dr. F. W. Patterson, of Baltimore county.

G. R. Dykeman, W. H. Mullen and S. W. Sollenberger, of Pennsylvania.

Gen. G. S. Meems and Dr. I. S. Tanner, of Virginia.

Joseph Clugston, Frick Manufacturing Co.		
Abraham Price, Geiser	"	"
J. E. Taylor, Taylor	"	"
J. B. Crowell, Crowell	"	"
C. E. Owens, Aultman	"	"
John Milton, Cooper	"	"
Jacob Ryder, American	"	"
A. R. Appleman, Newark Machine Co.		
D. H. Nunnemaker, Oliver Ch'ld Plow Co.		

Daniel Geager, Minneoplis Harvester Co.
W. M. Baker, McCormick Machine Co.
A. B. Farquhar, Penna. Agricult'r'l Works.
Joshua Thomas, Osborne Machine Co.
L. H. Lee, Champion " "

[We return our thanks to the managers of the Society for this evidence of their esteem, and tender to them our best endeavors to forward their success.—ED.]

Distribution of Clover.

Mr. J. B. Dodge, Statistician of the Department of Agriculture, gives some interesting figures from the census returns, showing where the supply of clover seed comes from. The clover seed reported by the census of 1850 amounted to 468,078 bushels, to 956,188 bushels in 1860, and to 1,922,982 bushels in 1880. Thirty years ago, nearly half the product was in Pennsylvania and Ohio; New York produced nearly a fifth, and Virginia, New Jersey, Indiana, Maryland, Michigan, and Connecticut contributed nearly all of the remainder of the crop. The distribution in 1880 was as follows:

	<i>Bushels,</i>
Ohio.....	370,747
Michigan.....	334,422
Wisconsin.....	294,471
Indiana.....	272,330
New York.....	171,986
Pennsylvania.....	155,181
Illinois.....	156,599
Iowa.....	58,675

These States furnish all the seed except 118,571 bushels, and Maryland and Virginia, Minnesota and Missouri yield more than half of this remainder. The extension of the clover area is rapidly progressing, aided by the makers of implements. In the census year there were 1,412 clover hullers made; 532 in Indiana, 436 in Ohio, 300 in Maryland, 79 in New York, 40 in Pennsylvania, and 25 in New Jersey. The census does not report the acreage in clover, but State reports give the following areas:

	<i>Acres.</i>
Ohio, 1881.....	660,361
Indiana, 1880.....	302,045
Michigan, 1881.....	242,585
Illinois, 1880.....	164,810
Wisconsin, 1881.....	120,134
Kansas, 1881.....	29,097

The figures for Wisconsin represent only the area cut for seed. There is a larger

proportion of clover cut for hay in the minor clover States than the seed record would indicate. The whole area in clover may not be definitely stated, but from an analysis of all available local data, an estimate of three million acres in the United States may be relied upon as approximating the truth.

Clover seed is exported in increasing quantities—in the last fiscal year nearly three times as much as of cotton seed—amounting to 32,167,882 pounds, or 536,130 bushels of 60 pounds, valued at \$2,925,911. The seeds are used not only by farmers, but also by merchants in colored silks and satins. Germany took 13,938,682 pounds last year, and France 6,568,806 pounds. The export price was nearly \$6 per bushel, and prices the present spring in our own markets have ranged from \$7 to \$8. It is a crop of great value to our agriculture, and its future extension must be very marked, both in volume and geographical range.

Mr. Dodge truly remarks that clover is the synonym of fatness. To "live in clover" is the height of animal enjoyment in man or beast. If turnips may be held to be the keystone of English agriculture, clover might claim a similar relation to the American system. The primary idea is fertilization, recuperation in both cases, the feeding value of each being really a secondary consideration.

We have often remarked with regret, the little attention that is now paid to clover culture in Maine. It is a fact that there is comparatively little clover grown here, and for seed our farmers depend almost entirely on that grown elsewhere. Every farmer knows the value of early cut clover as a fodder for all domestic animals. When preserved in the silo it makes an excellent winter feed for cows, and when considered in connection with its fertilizing and recuperative qualities, it is the most profitable forage crop that can be grown. Says Mr. Dodge, and his statements are based upon facts derived from the census:—"In the West, clover takes the place of commercial fertilizers, as does the cow pea in the South. It also disputes with chemical fertilizers the domain of the Atlantic States." We would like to see our own domain more sharply contested than it is.

[We agree with the *Maine Farmer*,

from which valued exchange we have clipped the above. Why should Maryland and Virginia have lost so much ground in the production of clover seed within the last 30 years? It is certainly a valuable crop, coming after the first crop of clover has been pastured, or cut for hay or ensilage, its crop of seed is comparatively gratis, and every farmer should at least grow his own clover seed and enough over to sell, to pay the cost of saving and threshing the whole crop. After the seed has been saved the same land will afford a fine fall pasture. We have often pointed out this grand defect in the agriculture of our State, and hope our farmers will hereafter reform in this matter. More anon on this subject.—EDS. MD. FAR.]

THE DAIRY.

For the Maryland Farmer.

Dairying in New Localities.

While there may be a temporary cloud drawn over the present dairy sky, it will not be long before, stimulated by a reaction in high prices, there will be new converts to the dairy methods of farming, and as there is often in districts just going into business, a lack of knowledge relating to just what they should know, the writer, in a brief way, will try to give a few hints at least that may have a little bearing upon the case in point.

The first great difficulty will be in obtaining profitable cows, such as will give the new business a good send off, and not prove as it often does at the start, quite discouraging or rather up hill work, such as will require sharp figuring to find whether dairying is being carried on at a profit or a loss. Just now, the opinions of dairymen are divided between the difference in value of a cow that is good for 9,000 lbs. of milk in a season, or one that in the same time would give scarcely half of that amount, but would in 40 weeks make 500 or 600 lbs. of butter. As a general rule, a cow that will in nine months give 4,500 pounds of average milk, may be regarded as a prime cow. The market has much to do with the selection of your stock, and whe-

ther you market your own products or sell to the nearest dealer. It need not be expected that the whole dairy will milk up to one standard of excellence, but there must be a good average, and now and then the dropping from the list the poorest cow.

It is quite a mistake to suppose that because some individual cow, or quite a number for that matter, have a milk record of 20 pounds of butter, or 500 pounds of milk per week, that all the cows of that breed, or even some family of that breed are equally good, and it is quite probable that the farmer who embarks in the business had best buy up a dairy of the best cows that he can find in his locality, and immediately resolve to do two things, buy a bull from some standard family of milkers, one whose dam has an excellent record, and at once proceed as fast as circumstances will warrant to raise his best heifer calves, and keep the first bull in service as long as possible, crossing him upon his own get, to fix the milking strain of his heifers. The in-and-in breeding twice or three times will do no injury, if a selection of the best is practiced. While the theory of crossing thoroughbreds, one breed with another, is advocated, the result is not so beneficial, for the dairy, for it is too violent a cross, bringing antagonistic natures almost together. For years to come, the crossing of a thoroughbred bull upon the best native stock, and their offspring will pay the farmer best, as the grades will come to possess the merits of the sire, and the health, vigor and acclimation of the native stock, which possess a health that no thoroughbred can rival.

The farmer then while getting a stock of cattle that will pay him best, is escaping yet mongrelism on the one hand; and if he only uses a male from a family that is of an established milking strain, he is building up his herd towards a type that he can depend upon, but the introduction of any blood that is unknown, is running a risk that should not be taken, and the progeny may take a direction not desirable, and the fixed type sought may be lost.

The indications are that the production of dairy goods is to revert back to a sharp line drawn between butter and cheese, and that there will in the future be less of the mixed half-and-half; poor butter and poorer cheese. If the new dairyman has not located in an already pronounced dairy

district, the making of butter will, as a necessity, have to be followed, either as a patron of a cream gathering butter factory, or the home made article of butter; but as he can hardly afford to sell his butter at 10 cents per pound less than creamery butter, when the cost to produce of equal value was to him the same, the best plan is to sell the cream for a year or so, or if a capable manager can be found, and others desire to go into the business, it would be a good plan to establish a co-operative creamery, and sell to the market direct. There is an individualism about this sort of dairying, that gives a man all the credit he is entitled to, and the better he manages, feeds and cares for his cows, the greater will be the number of inches of cream upon his milk, and he is not compelled to share it with a neighbor in averaging the products. At the combined cheese and butter factory, there is no known way of drawing a line between fairly good and pronounced bad milk. It has to be massed together and hence in a new dairy district, where there was a great many beginners, such a general acceptance of milk is very discouraging to those who strive to excel; and substantial progress cannot be made under these circumstances. Many a dairyman gives up in disgust and pronounces dairying one of the delusions of the age. Some of the methods of successful dairying in new sections will be next considered.

JOHN GGULD.

Ohio, July 14.

For the Maryland Farmer.

The Farmer's Cow.

In these days when fancy farmers take so much delight in paying fancy prices for fancy stock, one is quite bewildered in attempting a choice for general farm use. By this we mean that "fancy points" are of more consideration than those which make at the pail or in the creamery, combined with those that are indicative of good results when turned off for beef.

The question the farmer wants to know about is, what breed most nearly combines the good qualities of a milk, butter and beef producing animal; this determined, we shall know what is the farmer's cow. It is very well if a man can afford to keep Jerseys for milk and butter, and Holsteins or Shorthorns, or Devons for beef, but

pure bred stock of those breeds cost money, and but few farmers of average means can afford to keep them. But if but one of those breeds can be kept, which shall it be? Perhaps no breed unites all good qualities to such an extent as the Shorthorns, and yet one should not choose of these promiscuously, especially when selecting for milking qualities, choose from the milking families. The Shorthorns are superior beef producers, are then to be considered, since when they are to be turned off for beef there is something to build on. They give a quick return for capital and food.

Many will claim that the Holsteins and Devons are in every way the equal of the Shorthorns, yet we are not inclined to think they will have to yield the palm to the Shorthorns, when *most* good points for the farmer's cow are to be considered. Individuals of other breeds may exhibit just as fine general purpose characteristics but no breed can be better depended upon than the Shorthorns. As good as are the Shorthorns, however, a grade may be quite as desirable as a full-blood, and if a cross can be made between a Short-horn and some one of the other breeds, it will make an excellent farmer's cow.

Chatham, N. Y.

J. W. D.

Prof. Arnold on Butter Yields.

Prof. L. B. Arnold, the well-known authority on dairy matters says, in the *Farmer's Advocate*.

"The strain after extraordinary butter yields is a little unhappy. It is exhausting to the vital force of the animal, and, like extraordinary yields in quantity, the product is vitiated in various ways. When the secretion of fat is unduly stimulated, the excited condition of the milk glands causes them to take into their products what, under a less excited state, they would leave out. Milk fats in a normal condition are made up to a large extent of oils and soft fats, giving to the butter a soft texture, low melting point and high flavor, the oils which contain the flavor being then in the largest proportion. As the milk glands become abnormally excited, they take in more of the harder fats—stearine and margarine, which are the chief

components of tallow—and as they do so the butter grows stiffer, its melting point is raised and the flavor diminishes. By the time the mammary glands of a cow of ordinary size are stimulated to an activity which enables them to take in the material of making from five hundred to eight hundred pounds of butter in a year, they will have exhausted the resources of fat in her blood to such an extent that includes so much of the hard fats which are accustomed to be deposited about the kidneys and other parts of the body in the form of tallow, that her butter approximates, if it does not actually become a naturally formed oleomargarine. I partook of some butter in Pennsylvania, a few years ago, the product of a Jersey cow, giving some six-pounds of butter a week, that had so much of the tallow element that it stood up as a cake of tallow when the mercury ranged among the nineties for three successive days, kept all the time in rooms above ground. There was no need of putting it in a cellar or refrigerator. Though it kept so nicely and was so very high colored, it would hardly range above oleomargarine in flavor; yet the owner of the cow considered it fancy, but he was alone in his judgment.

"Larger yields have turned out better butter, but extraordinary productions have so often approximated its characteristics as to be suggestive. Professor Henry E. Alvord, manager of the Houghton Farm, described to me the peculiarities of the butter of a Jersey prodigy in production, which were strikingly similar to the Pennsylvania sample. While the owner of the cow considered it splendid, the Professor, who is one of the best of experts, regarded it as unfit for the table. A tendency in other large yields toward the same peculiarities, has attracted the attention of others, as the contributions to agricultural journals every now and then indicate. It is not a strange inference to make that excessive production should tend to lower the quality of butter, when the origin of its flavor is remembered. Butter has two sources of flavor. One comes from the volatile animal fats which originate in the body of the cow—butterine and its associates; and the other and principal one comes from the flavor-oils in the food, and of course cannot exceed the amount in the food consumed. If the amount which can be utilized is di-

luted by being diffused through five times as much butter in one case as in another, it must be apparent that the flavor in the larger quantity will be the lower."

HAND CHURNING on dairy farms is a labor that should be abolished. It is slow, wearisome and exacting upon a girl or a woman, and is too much like organ grinding to be suitable to a stout man while there is a calf on the place that may be trained to do it. A light power, suitable for a calf or two calves, can be procured for about the same amount as a man's time spent in churning in one season would be worth, so that the cost can be earned in a summer by doing more valuable work that a calf cannot do. Where the churning is heavy enough, a bull, where it is kept, may be trained early to do this work, and the discipline and exercise will keep him in good health and vigor, and out of mischief. On farms where a bull is necessarily kept, it should be made to earn its feed by work in a tread power; churning, cutting fodder, grinding meal, thrashing and sawing fire wood, are all such chores as may be done by this animal, with advantage to itself, and profit and safety to its owner; for a bull thus trained from calf-hood will always be docile.—*The Dairy*.

A QUART of milk having the specific gravity of 1.035, weighs 2.15 lbs., or very nearly 2 lbs. 2½ oz. 10 quarts of milk then weigh 21½ lbs., and 20 quarts, 43 lbs. The common deep pail holding 20 quarts can be easily estimated without measuring or weighing, by having a mark at the 20 qt. line. A 12 quart pail, when filled, will hold 26 lbs. within 2 oz.; and of quarts will weigh as nearly as possible, 25 lbs. A very convenient pail for deep setting is one 8 inches in diameter. and 20 inches deep, having a crimp made one inch from the top edge. This holds 14 quarts or 30 lbs., as near as may be. With such pails one can tell precisely how much milk is drawn at each milking. It is a good average herd of which four cows will fill two of these pails at a milking.—*The Dairy*.

"I'm happy to say Dr. Benson's Skin Cure has cured my Eczema of the scalp, of 4 years standing." Jno. A. Andrews, Atty. at Law, Ashton, Ill. \$1 at druggists. Endorsed by physicians.

POULTRY HOUSE.

For the Maryland Farmer.

The Brahma Fowl.

With the exception, perhaps, of the Plymouth Rocks, there are no other breeds which have the widespread popularity, and deservedly so, of the Brahmas, though the light Brahmas seem to be the favorites, their more attractive markings having no doubt much to do with it. The Cochins belong to the same class of fowl, but they do not seem to have as many desirable qualities as their cousins, the Brahmas. For those who wish to raise heavy weights there are no breeds which will give greater satisfaction and they are always in demand, whether as breeding stock or for food purposes. They are very domestic in their habits and will content themselves in a very small enclosure, if kept liberally supplied with food, which makes them desirable to keep where they have to be confined in regular breeding yards the entire season, on account of a want of sufficient ground to let them run. Some persons urge against the Brahmas the fact that they are lazy and too indolent to hunt up anything for themselves, unlike the active Leghorns and Hamburgs. They are, however, healthy, prolific, and make most excellent setters and mothers. They lay well both in winter and in summer, if they have the care they should have at all times, and are well fed. In fact, the great secret, if secret it may be called, in having eggs in winter, irrespective of breed, is to feed liberally and make the quarters warm and cozy.

E. Jr.

For the Maryland Farmer.

Breeding Poultry for Eggs.

There is always a paying demand for fresh laid eggs for your breakfast in the morning; in our large cities, and uniformly high prices can be gotten. It is of course desirable to be near enough to the markets to furnish the consumers direct, but the facilities of quick and cheap transportation afforded by the railroads and steamboats make it easy to be fifty miles away, and still be near enough to breed for eggs profitably.

Whether the fowls are thoroughbred, grade, or so-called common ones, they

should when eggs are the main object, be bred singly for that purpose, and those who care best for their flocks in every way, and who see that only good, steady layers are kept in the flocks, will be the ones who will realize the greatest proportionate as well as gross profit therefrom. As the early hatched pullets will, when well developed, commence to lay the fall following their hatching, they are far more profitable to have than late hatched birds, and such birds are the ones which can be made good *winter layers*, which are eminently profitable, eggs being both scarce and high-priced during the continuance of cold weather. It rarely pays to keep the fowls for laying purposes after they are two years old, for after that time the number of eggs produced is below the paying point. They pay better than to fatten quickly and well, and market or consign for house use. A well fattened hen, two years old, makes a most excellent stew, or a roast which cannot be excelled. We were never an advocate of young, immature meat of any kind for table use, though many will have none other.

The large bodied Brahmas or Cochins are not by any means superior layers, and those who wish to produce the best results in eggs—the greatest number of dozens—will do well to try the Leghorns, and especially the white variety which has been bred for so many years for egg production, they cannot now be excelled in that particular by any other breed. They are of medium size, are strong, healthy, vigorous and disposed to hunt up all the stray morsels around if they have their liberty. They should not be kept in confinement else they will not have an opportunity to do their best for their owner, but give them free range, plenty to eat at regular intervals, and comfortable, cleanly quarters and there need be no fear of the results.

If common hens and pullets are kept, we would advise killing off the common cocks or cockerels, and using instead, vigorous Game (Black Breasted Red, preferred,) cocks or cockerels, changing them every second year at the furthest. From such matings we have secured some very fine layers.

E. Jr.

SKINNY MEN.

"Wells' Health Renewer" restores health & vigor, cures Dyspepsia, Impotence, Sexual Debility \$1

Whitewash Well.

Whitewash well is our advice. It is not enough to merely make the coops look white, for something else is necessary. Cleanliness promotes health among fowls, for they love light and comfort, but the enemies of the fowls—lice—need a good swabbing of it. Whitewash should be so applied as to fill up, as much as possible, all the cracks and crevices; and it should be applied liberally, because it is a very cheap article. We have discovered by giving it a trial, that a few spoonful of Little's Chemical Fluid added to whitewash makes it a fatal dose for lice or any other kind of vermin. Our practice, in order to prevent lice, is to add a few spoonful of it to an ordinary sprinkling pot of water, and sprinkle the water over the floor, roosts, and around the sides of the coop. After doing this the whitewash is applied. Even the yards may have a sprinkling of it. Should the lime unite with the earth or sand, the mortar so formed will gradually be picked up by the fowls and made serviceable. Lime is an excellent disinfectant also, but it acts differently from other disinfectants, by liberating and allowing to escape all obnoxious gases, while most acidulated disinfectants "fix" them by altering their composition. There is nothing that adds more to the attraction of a poultry house than a pretty, white appearance and this is enjoyed by the fowls as well as by those who manage them.

Feeding Grass to Poultry.

If fowls are confined they cannot procure grass or other green food. When running at large they gather much about the range that serves for food. But fowls can be fed on grass by giving it to them in the yards just as well as if they gathered it themselves, only the manager should chop it fine in order that they may eat it conveniently. A small patch of clover is an excellent thing to have near a poultry yard, and if, when sowing the clover seed, it is mized with one-half of its bulk of lawn grass, the mixture will be all the better. In the fall sow a small piece in rye which will give an early gathering, and a few square feet sowed broadcast with a mixture of mustard, radish, lettuce and kale comes in finely for feeding at a later

period. In winter, good clover hay should be cut to a fine state, steeped in warm water, and the mixed mass thickened with meal and bran and then fed. But in summer the fowls need a supply of green food, more than at any other time, for exclusively grain is too heating for them. It is more economical to grow the green stuff on a separate place and feed it in the yards, than to allow the fowls to roam and destroy it before it can be utilized. Grass will support a goose without grain at all, and poultry will thrive on it with but very little assistance in the shape of other food if the green stuff is of a variety and fed in a fresh condition.

Do not hurry young chicks out of the nest too soon after they are hatched. Give them time to warm up well and become used to being out of the shell.

Never cross non-setters for it destroys the good qualities of both breeds. Crossing non-sitters produce the most inveterate setters.

Where the range is extensive, geese, ducks and turkeys should be an addition as they are able to do much foraging for themselves.

Gapes in Chickens.

The following we clip from the *Country Gentleman*. It is seasonable, and as it is from one of our occasional correspondents, our readers will study it for their own benefit,

Among the usual annual communications in agricultural papers, we have the old story about worms in chickens' windpipes, and the horsehair and feather remedy. Years ago I lost about half my chickens with gapes, rarely succeeding in doing any good with the hair and feather. The best remedy I have seen applied is the thumb and fore finger. Find where the worm is, and with a twisting squeeze detach it from the wind-pipe and the chicken will cough it up. It is not a remedy I propose to speak of, but a preventive, an ounce of which is better than a pound of cure. Although the membrane is red and looks like a small fishing worm, or a bunch of them, I have nothing but the usual story so often told, for authority that it is a worm, and I am not strong in the faith that it is a worm. On the contrary, I think it is flesh formed

from mucus and has become organized and is part of the chicken, the same as a tumor or a similar formation in the windpipe of a child when the first symptoms of croup are neglected; the mucus becomes organized and attaches itself to the windpipe, grows and kills the child by suffocation.

So with the chicken. The worm is the chronic croup, and the preventive is to keep the chickens dry and carefully handled during the cold, wet, spring rains, and grass damp with dew, having a dry, warm place to keep them in. Since this rule has been enforced, I have not seen a gaping chicken on the place for years, having watched for one the purpose of having it dissected and thoroughly examined by my friend Dr J. S. Conrad, who assures me that there is no worm in the matter, but a false membrane. If any of your readers near by, have any gaping chickens and will send him the windpipe with worm by mail, I have no doubt he will cheerfully dissect and report to the readers of the *Country Gentleman*, the result. His address is St. Denis, Balto. Co., Md, A. P. S.

Rock Hall, Md.

Journalistic.

THE DAIRY is a neatly published weekly paper, in New York city, "devoted to the interests of the dairymen of the world," by the Dairy Publishing Company, 102 Chambers street, corner of Church, N. Y., at only \$1.50 per year. It has very lately been started and is the only journal devoted exclusively to this great interest. Our appreciation of its merits are shown by the number of extracts we have made from its columns, that bristle all over with sound, practical common sense, mingled with able theories based on experience and tests.

A Precocious Milker.

Mr. J. A. Edmonson of Balto. county, stated to us last month that he had a cow 4 years old, never had a calf, but will be fresh in a few days, and is giving 9 quarts of milk per day, and running in a wood's pasture. She is pure Alderney but not a herd book animal.

THE IOWA STATE FAIR commences August 31st and closes Friday, September 7th. In all the departments the premiums have been materially increased over former years. The offerings are the largest in the history of the Society, amounting to \$23,000, classed as follows:—Horses, \$2,560; speed, \$7,100; cattle, \$4,017; hogs, \$1,124; sheep, \$636; poultry, 749; implements, etc., \$34; grain and seeds, \$396; vegetables, 391; sweepstakes grains and seeds, \$250; apiary \$110; pantry and kitchen, \$508; butter and cheese, \$652; fruits, \$412; plants and flowers, \$316; fine arts, household, etc., \$2,150; educational, \$200; boys and girls department, \$236; natural history, etc., 203. Two new departments have been added—educational and mining. These departments promise to be attractive, interesting and instructive. At a considerable cost the society has added a special feature to the dairy department—a centrifuge by which the cream is spun from the milk as soon as it is taken from the cow. Iowa will be the first to exhibit and operate the machine on a fair grounds in the United States. She was first to place a cold storage room on fair grounds for the preservation of dairy products. For the best herd of thoroughbred beef cattle \$500 is given for the first, \$200 for the second, \$100 for the third.

Notices of some Fairs for 1883.

From Secretary, Cyrus T. Fox, Premium List, Rules. &c., of the 29th exhibition of the Berks County Society, to be held at Reading, Pa., Oct. 2, 3, 4 and 5.

THE 23rd ST. LOUIS FAIR opens on Monday, the 1st of October, and closes on the 6th. It will be an immense affair if there is anything in energy and money. The association has appropriated *Fifty Thousand Dollars* for premiums. Many new features have been added, among which are premiums for specimens in the various departments of the fine arts, and also in the agricultural and machinery department.

Wells' "Rough on Corns."

Ask for Wells' "Rough on Corns." 15c. Quick, complete, permanent cure. Corns, warts, bunions.

MARYLAND FARMER

A STANDARD MAGAZINE,

DEVOTED TO

Agriculture, Live Stock and Rural Economy.

EZRA WHITMAN, Editor,

COL W. W. W. BOWIE, Associate Editor,

141 WEST PRATT STREET,

BALTIMORE, MD.

BALTIMORE, SEPTEMBER 1st, 1883.

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☞ COL. D. S. CURTIS, of Washington, D. C., is authorized to act as Correspondent and Agent to receive subscriptions and advertisements for the MARYLAND FARMER, in the District of Columbia Maryland and Virginia.

☞ Our friends can do us a good turn by mentioning the MARYLAND FARMER to their neighbors, and suggesting to them to subscribe for it.

☞ Subscribe at once to the Maryland Farmer and get the cream of agricultural knowledge.

The Fair Numbers of the Maryland Farmer.

No business man who desires to increase his trade in any one of the Middle or Southern States should fail to advertise in our September and October numbers this season. In addition to supplying our regular subscribers and advertisers with these numbers, we shall publish a large number of extra copies for distribution at the various Agricultural Fairs in the Middle and Southern States.

It is now a settled conviction with most advertisers that a Journal in the form of the MARYLAND FARMER is the best medium for advertising, because a Journal in this form is preserved for years, many of which are regularly bound and kept for future reference.

It is also an ascertained fact by the most intelligent and shrewd advertisers that popular Agricultural Papers of this country are the best mediums for advertising, and this is the reason why there is so large an amount of advertising in the MARYLAND FARMER. Every advertiser who has availed himself of this medium has found it advantageous.

The old reliable MARYLAND FARMER comes to us, for July, with a fine steel engraving of Ezra Whitman, Esq., its energetic proprietor and able senior editor. It is the face of a man who would readily be selected as a laborious, upright, worthy citizen, one whose presence in any community would guarantee solidity and true success in all that he undertook with his hands or guided by his counsels.—*Southern Cultivator and Dixie Farmer.*

THE MARYLAND FARMER is one of our prized monthlies. The July issue contains an elegant steel plate portrait of Mr Ezra Whitman, its venerable founder, and a short sketch of his business career. Published at Baltimore, at \$1 per year.—*Seed Time and Harvest.*

MARYLAND FARMER.—We have received this book for August. It contains a fine likeness of Gen E. A. Carman, Chief Clerk of the Agricultural Department, and treats on all subjects in which the agriculturist is interested. Published by Ezra Whitman, Baltimore, Md., at the low price of \$1.00 per annum, in advance. It should be in the hands of every farmer—*Frederick Examiner.*

The Maryland Improved Live Stock Breeders' Association

Met at the Carrollton hotel, in this city, on the 8th ultimo., and after the transaction of usual business, prepared essays were read by Messrs Ward and Sander-son, which commanded the undivided attention of the Society. We are glad to be able to present both of these papers.

THE IMPORTANCE OF SANITARY SCIENCE TO LIVE STOCK OWNERS AND BREEDERS IN MARYLAND.

Mr. Chairman and Gentlemen:

The subject selected by your secretary for my paper this afternoon is one of some importance and magnitude not only to you as owners of live stock, but to the general commonwealth, for upon the healthful condition of your flocks and herds does the food supply of the masses depend; and as the United States of America has now become the centre of the animal food supply to Europe, a supply too, that is now, and must be hereafter on the increase, there is no country in the world that should be more deeply interested or concerned on this subject.

In Europe for some years the highest educated minds have been exercised on the practical laws of sanitary science and hygiene, and in England there is no scientific body more popular than the Sanitary Science Society of London, the *public* generally taking deep interest in its workings and teachings.

This remark will, I am sure, suffice as an introductory to the remarks I have to make and lead you to follow me with care and consideration as I proceed to explain my views on the sanitary condition of your stock and homesteads as brought under my notice during the short period I have had the pleasure of residing among you in Maryland.

Firstly; I should explain to you that *sanitary science* very properly belongs to that branch of medical study which is termed State Medicine, for all governments should more or less interest themselves in the health of their peoples, and their stock and herds, bringing the most advanced ideas to bear on the prevention of diseases and the suppression of them, and especi-

ally those of a zymotic, enzootic or epizootic nature—that is, contagious or infectious diseases.

In this, the nineteenth century, attention has but recently been given to the laws of sanitation and hygiene, that is to say, the deep attention and consideration this important subject demands.

The treatment of *individuals* rather than *communities* having occupied the attention of authorities previously. "The increase of population is the increase of wealth," it has been truly said, and the same might be added on live stock increase.

It is, however, with sanitary science alone that I have to do this afternoon, that is, an exposition of the best means to maintain a healthy condition of your stock by an observance of its teachings. Now it is patent that pure air is most important and necessary in this maintenance, and animals whilst in the open fields have this *ad. lib.*, but the question is, how do they fare when housed during inclement weather or the winter months. Centuries ago, it was found that insufficient cubicspace or crowding in ill-ventilated, filthy dwellings, with bad drainage and food of unwholesome character were the most prolific causes of pestilential fever in man and animals, yet to this present day but little attention is given to this matter, unless after repeated outbreaks and repeated heavy losses, amounting to almost a national calamity, that attention is developed to the sanitary arrangements, or *unsanitary* I might have said more properly speaking—and it may truly be said that in nine cases out of ten, this sad neglect is the direct or indirect cause of outbreaks, loss and spread of preventable diseases.

Of this I am certain, when more care is exercised in this direction *i. e.* to cleanliness breathing space, pure air and daylight, together with wholesome and suitable provender, the health of your live stock will improve and much animal suffering prevented, as well as a great saving of stock from loss, a rather important item in this country, now looked to by countries beyond the seas for their animal produce, and at a price too which shall place animal food within the reach of all classes.

During my visits to farms in several districts of Maryland, I have been struck with the disregard to the healthful stimulant, *daylight*, given to us free of cost, and yet barred out from the stables and cow sheds.

Surely this would not be so if it was known how beneficial light is to the maintenance of health, and its influence in the well being of all animals of domestication. In former days it is true that stock-keepers had their fattening byres or sheds made as dark as possible, because it was found that animals would thrive or fatten faster when thus treated, and fowls, ducks and geese were fastened in dark cellars to undergo the cramming process, all of which has been now abandoned in this more enlightened age as a great cruelty, as well as producing flesh of an impure character.

The cubic space is another matter requiring attention, in most of the places this is totally inadequate, and especially so with regard to the height of these buildings. These should not be under ten or twelve feet, and the cubic space allowed should be from 1,200 to 1,800 or 2,000 feet, and with this space apertures should be arranged in the ceilings for the escape of impurities, for when it is remembered that a horse discharges, in round numbers, some 48 gallons of carbonic acid and watery vapor per hour, which weighs some 14 ounces, and the average cow or ox discharges some 59 or 60 gallons weighing some 17 ounces—elimination is deleterious to health, indeed poisonous, as it is not patent that free egress should be allowed for it.

Respiration produces vital changes in the blood by atmospheric action, and as impurities float in the air, how important is it that all this should be guarded against by strict cleanliness in and around the stables and sheds. 21 parts of oxygen and 79 parts of nitrogen go to make pure air by nature's laws, but when by man's negligence the laws of sanitation, other and obnoxious elements get mixed up, can it be wondered that diseases of a virulent character frequently originate?

Drainage appears to be almost entirely if not quite ignored. Surely the expense would not be great in cutting and and fixing channels to carry away the effete emanations from the animals, rather than allow the floors to be saturated and impregnated with these excrements, to, in time, undergo decomposition and generate animal organisms to infiltrate in the atmosphere and eventually pass into the animal's system, therein to fructify and develop disease.

Therefore it will be seen how important it is to keep manures as far removed from

animal habitations as possible. No doubt, many people think it has a businesslike appearance, to see a quantity of manure lying in and around the cattle yards; to such I will say give up your mistaken ideas, for such have been abandoned in the old country because of the benefits resulting, and the manure has been carted away next to the fields upon it will be in due time spread and allowed to rot there in readiness for the spreading rather than to rot in the yards to the danger of the health of the dairy stock. Of course, a certain amount of manure must be kept in the yards, but I allude to the accumulation for rotting of large quantities.

Water is another important matter, this should be free from pollution by both animal and vegetable matter, I am satisfied with the water supply here, which is far more than I can say for the old country, the old fashioned horse pond being still the order of the day there on many old farms, and sad indeed are the records of sickness and loss arising therefrom.

It must be borne in mind, however, that spring water or well water are too cold to be given to animals with safety to the digestive functions, the water tank should be filled some hours before the animals partake of it.

The structure of your sheds and byres is a subject needing your attention. The wretched hovels I have seen in some places are no credit to the owner of a \$1,000 cow. It seems to me too utterly utter to place a cow of that value or half that sum in a \$5 shed or hovel.

Doubtless wood is the cheapest material for building, and this being so, there is every reason why these structures should be constructed on sanitary principles. the height, breadth and length receiving due attention, as well as daylight and ventilating shafts before referred to. I may here remark that I question the healthful state of your wooden flooring, from its absorbing properties, and where this is used I would like to see some one of the many disinfecting powders in general use, and I have been astonished somewhat that this is universally neglected. The location is another matter of importance, low situations for buildings may give shelter but at the expense of pure atmosphere. An elevated position is most desirable, for here it is that "OZONE," the great scavenger of nature is to be found, and although elevations may be objected to

because of exposure to your frequent storms of lightning and thunder, it is an acknowledged fact that these lead to the destruction of malaria, for after them, pestilential fevers have been known to subside spontaneously.

Dietetics is another subject of importance but is foreign to any intention in this paper.

In conclusion I will say that as far as my inspection has been permitted to go, I am pleased with the general healthy condition of the live stock of Maryland. In your cattle sheds I have seen animals equal to any that England can produce, indeed I have been struck with the breed and symmetry of many animals I have seen. This leads me to opine there is a happy future for the cattle trade in Maryland as soon as the public mind has been appeased on the reported prevalence of infectious disease among them.

It will be a fortunate thing for the county when full facilities are given the veterinary inspectors to investigate the sanitary condition of the various States, so as to furnish an authentic report thereon, as is the custom in Europe.

Aside from cattle diseases there is at this present, great consternation about an outbreak of glanders amongst horses, a disease by the way of a most deadly nature, fatal alike to man and horse, and one of those which can be suppressed by stamping out, the true nature of which appears to be but little understood, for last month a horse owner in Pennsylvania thought he had a bad form of influenza among his teams, but when my associate, Dr. Lockwood arrived on the scene and explained the true state of things, the animals were at once destroyed and the stables purified. Now to sow this disease broadcast would be deplorable, still, there is not at this present, any power given to the executive department to prevent this, and the same may be said of other contagious diseases.

Gentlemen, you, as the representatives of live stock interests of Maryland, must have a powerful voice and influence combined, so that words uttered by you will have due weight, therefore when the opportune time comes you will, I am sure, speak out.

I will therefore conclude my remarks by saying that at all times I shall be most pleased to place myself at your disposal,

and will ever be ready to exert myself to the utmost of my power for the benefit of the live stock owners of Maryland.

I thank you for the kind attention you have given me, my paper has been hastily prepared because the notice was short and my professional duties pressing, otherwise something more elaborate and delectable might have been placed before you.

In the busy bustle of life you have little leisure for thought, leave alone *action*, on subjects that have not a pressing nature for immediate action, that you may be led to pass such *matters* by as I have alluded to but I trust it will not be so with you, for in England thousands upon thousands of dollars were lost before the action took place, and all might have been saved had immediate action obtained.

The following excellent and practical essay was read by Mr. Sanderson, of Baltimore county, Md.

"FALL FEEDING OF MILK COWS."

This is a subject that is of interest to every one, even if he is only the owner of a single cow. Summer, with its luxuriance of pasture, supplemented with corn fodder and the various millets, gives abundance of feed and makes every judicious dairyman's heart rejoice as he counts the rewards of his labor.

But with the summer ended by August's scorching suns, and the fall ushered in with its delightful cool nights, yet enervating days and all this is changed. We love this season of the year, with its bright and beautiful flowers and foliage, with its misty, haze that hangs upon the mountain tops, with the golden ear of corn peeping out from almost tropical luxuriance—the sight of fine cattle, be they of whatever breed they may, grazing upon yonder hillside would, or rather should make the heart of every one rejoice. Yes, even a *Stoic*.

But you have not come here to listen to the exaltation of nature, for if the love of the beautiful and of the good were not implanted in you—you would not be farmers.

Whatever may be our object in feeding, we all know the importance of pasture. Cattle may be and are kept by means of artificial feeds in connection with cut clover, fodder corn and the millets, but it is an exception and not often with profit. The

fact that land in grass yields a greater profit than when this same land is cultivated in grain crops has long been known. In Holland, and the Netherlands, and England grass culture has been carried to a high art and good grass farms are rarely in the market.

These countries have a very moist climate, and it is said to be rare to meet a gentleman there without his umbrella. We, on the other hand, are deluged at one season of the year and baked at the other. So our farming, in many respects, must be totally dissimilar. The Italian rye, the oat, and the Bent grasses, which occupy such a conspicuous place in English farming, are comparative failures with us.

We have to exert our faculties and coax nature by every art, if we wish to have even the semblance of a permanent sod. And yet I believe it is possible on most farms. I have tried most every grass and most every system, and thanks to the writings and practical application of them, of our own well-known countryman, Mr. A. B. Allen, of New York, and to the zeal and energy of the late Mr. Michi's over 20 years devotion to agriculture in England, we have something permanent to stand upon. Both of these gentlemen believed in high feeding of cattle, and through them the land—following out the Scriptural text, "Where no oxen are, the crib is clean."

Land being valuable with me, my object was how to make the most out of it. So I have combined pasturing and soiling and found them to work well together. To accomplish this I wanted a grass that would furnish feed early and late in the season, so I hit upon *orchard grass*, and have found no reason to change my favorable impression of it, some of the good qualities of which are—permanency of seed, shooting up quickly, especially after a slight rain, affording an abundance of nutritious feed late in the fall, and retaining a strong hold upon the soil if it is sown thick. My manner of sowing some ten acres and its after treatment is thus:

The soil which is a moist clay loam, had been in sod some years before—this was well and thoroughly plowed in the early fall and left rough for the winter. The following spring, (year 1880,) the ground was made fine and mellow, and on about one-half of it, fine, rich, rotted manure was applied, spread from the wagon at the rate of

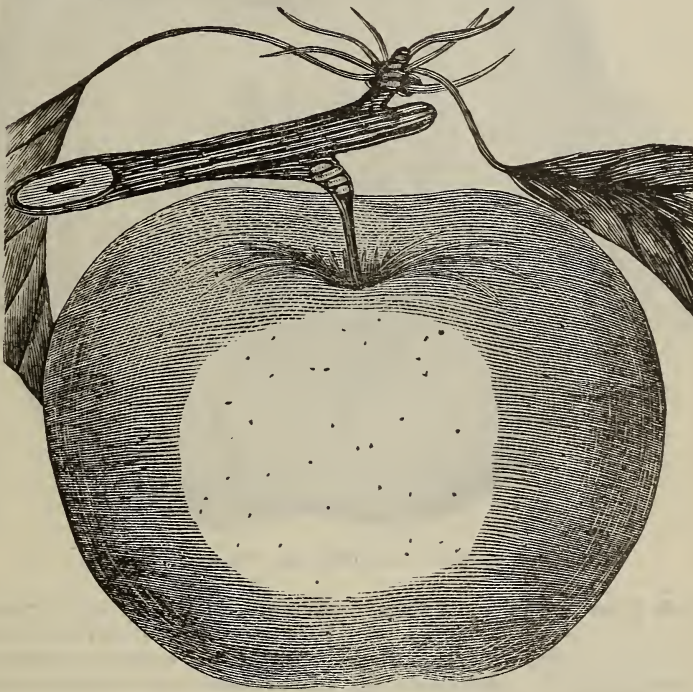
5 four-horse loads per acre—the other part 400 lbs. of raw bone per acre was applied. The raw bone did not seem to do much good, and this part, the following fall was top-dressed with 40 bushels of unleached wood ashes and 2 bushels of plaster which had a marked effect upon it, bringing in many native grasses, especially white clover. Two bushels of orchard grass and one peck of clover was sown per acre, early in April, and this was brushed in and the ground rolled. By fall the grasses were knee high and it was lightly pastured, just enough to break the grass well down before the snows of winter would smother out the roots.

The next season it afforded fine pasture for nine cows and five heifers, (yearlings,) supplemented with one feed a day of cut corn fodder, mixed with two quarts of mill feed, (Patapsco feed) and 2 lbs. cotton seed meal fed to each cow at night, during the months of August and the fall, and sometimes, though not always, depending upon the abundance of the pasture, one cart load of sweet corn fodder when it came into tassel would be spread upon the field per day for them. Early in the winter the ground is thoroughly harrowed both ways, spreading the accumulated manure evenly over the surface, and if any bare spots appear, fresh seed is sown upon it, and in the spring two bushels of plaster, mixed with as many ashes as I have, are sown over the field. This makes a cheap, rich pasture, many other grasses are springing up and eventually I think will predominate entirely, and by changing around occasionally into the meadows I have an abundance of cheap, rich feed late in the fall, and with pumpkins cut and fed in season, the tops of the various roots, I have plenty of feed. Now if this can be done on 10 acres, the same can be accomplished on 30 or 50 acres. We must apply the means for the end in view.

I am well aware that the same results may be reached by depending upon purchased feeds mostly, but that is not profitable farming. A farm should be so arranged as to show a cash money profit at the end of each year, and I hope that these ideas, hastily put together as they are, may only act as a stimulus to further extend the subject, which is a very wide one and one of the most important we have to deal with.

HORTICULTURAL.

We are indebted to Messrs Franklin Davis & Co., for the following cuts showing the general appearance and size of the two apples named, and we have taken also from their catalogue a short description of each fruit. These gentlemen have an extensive nursery at Richmond, Va., and are establishing a very large one near this city. Their object is to disseminate such fruit trees as are known to be adapted to the climate and soil of this State, Virginia, and other adjoining Middle and Southern States. It is very important to the young orchardist to know what varieties of fruit are best suited to his soil and locality. See their advertisement in this number of the MARYLAND FARMER.



EARLY RIPE.

"EARLY RIPE."—This fine apple, coming in as it does immediately after the early harvest, fills a want long felt by the orchardist. Its large size, handsome appearance, and good bearing qualities combine to make it the most profitable market variety of its season; the tree is hardy and of a vigorous growth; fruit large, yellowish white; flesh white, juicy, sub-acid; fine for the table or cooking. First of July.

"JOHNSON'S FINE WINTER, OR YORK IMPERIAL."—Medium size, truncated oval, angular; skin greenish yellow, nearly covered with bright red; flesh tender, crisp, juicy, aromatic; an enormous bearer, and hangs well on the tree. It is also a good keeper, retaining its flavor to the last. We cannot say too much in favor of this apple. All things considered, it is scarcely second to any in the catalogue as a profitable orchard variety. February to April. [See illustration on page 298.]



"JOHNSON'S FINE WINTER, OR YORK IMPERIAL."

The Black Knot on Plum Trees.

Dr. B. D. Halsted, writes of a serious pest of the orchard, in the *American Agriculturist* for August :

Mr. D. D. Gaines, near Catskill, N. Y., brings us peculiarly distorted branches from his plum orchard, and complains that the trouble is a serious one, as he has over two thousand plum trees more or less affected. The cause of this distortion of the smaller branches is a fungus, and it has long been known as "Black Knot." It has often been claimed by careless observers that the swellings were due to various insects which infest the peculiar outgrowths. The parasitic fungus attacks the young branches in early spring, causing them to

increase rapidly in size; rupture of the bark soon follows, and the soft substance, coming to the surface, expands in an irregular manner, and is shortly covered with a peculiar olive-green coat. The fungus plant is like many others of the same low order of vegetation, as the various moulds, mildews, &c., and consists of a multitude of fine threads, that run in all directions through the substance of the plum tree. The olive color of the surface is due to a vast number of minute bodies called spores, which are formed on the tips of the threads, and, breaking away from their attachments, serve to propagate the trouble. After the knot has grown to some size, its soft substance offers a good home for various kinds of insects, and it is rare to find such

a knot that is not thus infested. This was the strong argument in favor of the view that the knots were of insect origin. The scientific name of the fungus is *Sphaeria morbosa*, and this, the cause of the black knot is as much a plant as the plum tree upon which it lives.

The olive surface-spores continue to form through the summer, and at autumn, another kind of spore seems to develop within the substance of the knot. These are of slow growth and are not ripe until the following spring. The only remedy thus far known is the judicious use of the knife. The knots should be cut off and burned whenever they are found. They are most conspicuous in the winter, when the branches are not covered with leaves; but when a tree is attacked it is not wise to delay the removal until a more convenient time. The diseased branches should always be burned, otherwise the spores will continue to form for a while and thus propagate the contagious pest. If the tree is badly attacked it may be best to remove it entirely.

The Choke Cherry is a favorite host of the black knot, as the neglected fence rows often show in winter. All such trees should be rooted out. The cultivated cherry trees are subject to attacks by the black knot, for which the same remedy as that for the plum tree is recommended. Use the pruning knife, always at sight, and cut several inches below the swelling that all the infected portion may be removed.

Turnip Fly.

From the *American Farmer*, published by E. A. Hackett, Fort Wayne, Ind.:

"Air-slacked lime is recommended as a preventative against the attack of the turnip fly. It is said that as soon as the young plants appear they should thoroughly be dusted, with lime, and the practice continued until the plants are beyond the reach of the fly. It would be well to perform the operation while the dew is on the plants, as the lime would adhere to the leaves more readily; the same treatment is also recommended for the currant bushes.

Mother Swan's Worm Syrup.

Infalible, tasteless, harmless, cathartic for feverishness, restlessness, worms, constipation. 25c.

Fruit Tree Culture.

Instead of "trimming up" trees according to the old fashion, to make them long-legged and long-armed, trim them down so as to make them even, snug and symmetrical. Instead of manuring heavily in a small circle at the foot of the tree, spread the manure if needed at all, broadcast over the whole surface, especially where the ends of the roots can get it. Instead of spading a small circle about the stem, cultivate the whole surface broadcast. Prefer a well pulverized, clean surface in an orchard, with a moderately rich soil—to a heavy manuring and a surface covered with a hard crust and weeds and grass. Remember that it is better to set out ten trees with all the necessary care to make them live and flourish, than to set out a hundred trees and have them all die from carelessness. Remember that tobacco is a poison and will kill insects rapidly if properly applied to them, and is one of the best drugs for freeing fruit trees rapidly of small vermin. Finally, do not neglect to set out as many fruit trees of different varieties as you possibly can. If you have but a small farm put out the fewer number of trees, but put out as many as you can find space for. Larger farm, more trees. Fruit evaporators are comparatively inexpensive, they are very easily operated, and properly dried fruit is always saleable. If your farm is near a railroad you will be able to sell every bushel of fruit for city consumption that you may happen to raise, and you will realize satisfactory prices for it.

Consumption Cured.

An old physician retired from practice, having had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma, and all Throat and Lung affections, also a positive and radical cure for nervous debility and all nervous complaints, after having tested its wonderful curative powers in thousands of cases, has felt it his duty to make it known to his suffering fellows. Actuated by this motive and a desire to relieve human suffering, I will send free of charge to all who desire it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing with stamp, naming this paper. W. A. NOYES, 149 Power's Block, Rochester, N. Y.—*

For man it has no equal; for beast it is not excelled. What? Kendall's Spavin Cure.

The Soja Bean.

This Japan plant seems to be a subject of experiment at agricultural stations. The North Carolina Experiment Station offers the following as the result of their inquiry into the chemical character and value of the plant:

"The bean itself is one of the most nutritious known to us, quite unequalled in the amount of fat it contains, and containing at the same time a very large amount of proteins. The ripe plant yields a straw fully equal to a common hay in composition, while owing to the fortunate property the beans have of maturing and drying after the plant is cut, a still more superior hay may be made from it by harvesting the plants just when the pods are fully developed and still green."

Notwithstanding this seemingly valuable showing, this plant, although long well-known in Europe as well as here, has not yet found its way into cultivation. The forage is somewhat hairy, which is against it, and the seeds although nutritious are very hard and require long cooking to render them eatable. The famous sauce called Soy, of the Chinese and Japanese, is made from these beans.—*Nat. Tribune.*

WHORTLEBERRIES.—Mr. W. H. Yeomans, one of our regular correspondents, says in the *New England Farmer*:

"Twenty years have witnessed an extensive trade grow up in the line of whortleberries. About twenty-three years ago, in Columbia, Conn., a few bushels were picked and sent to market, and fairly 'went a begging,' but now bushels are picked every day, and as the bushes are natural to the soil and grow without stint, this little berry is a regular God-send to the less fortunate, who thereby receive many articles of life."

This pleasantly tasted wild fruit has become very popular everywhere. It is found in our markets abundantly, and dried, canned, and evaporated in large quantities in N. Carolina, and other States. It meets with ready sale in either form. It costs nothing except to pick and prepare for market, being one of Nature's free gifts to man.

"Dr. Benson's Celery and Chamomile Pills for the cure of Neuralgia are a success." Dr. G. P. Holman, Christianburg, Va. 50c. at druggists

BADEN WHEAT.—Mr. W. A. Summers of Prince George's county, brought to our office some specimen heads of wheat grown by him this season. It is evidently a new variety, dark red, large flinty grain, bearded, long, flat headed. Said to be very prolific and hardy. Mr. S. likes it much as a crop, and has grown it two seasons and thinks it improves each year. It was first introduced by Mr. Baden, who found a few heads of wheat ripening under a tree close to a wood lot; he gathered and sowed it, and admiring the product, continued to increase the amount until it has become an established variety in that section, and hence is called *Baden Wheat*. Mr. B. is a relative of him who established the celebrated prolific "*Baden Corn*," of forty years ago. This wheat has two rows to the head, and from 50 to 60 grains in each row. It is peculiar in appearance, and is much prized by the growers of it. Persons who wish to try it can obtain seed through the MARYLAND FARMER.

Mayor Beatty's Birthday.

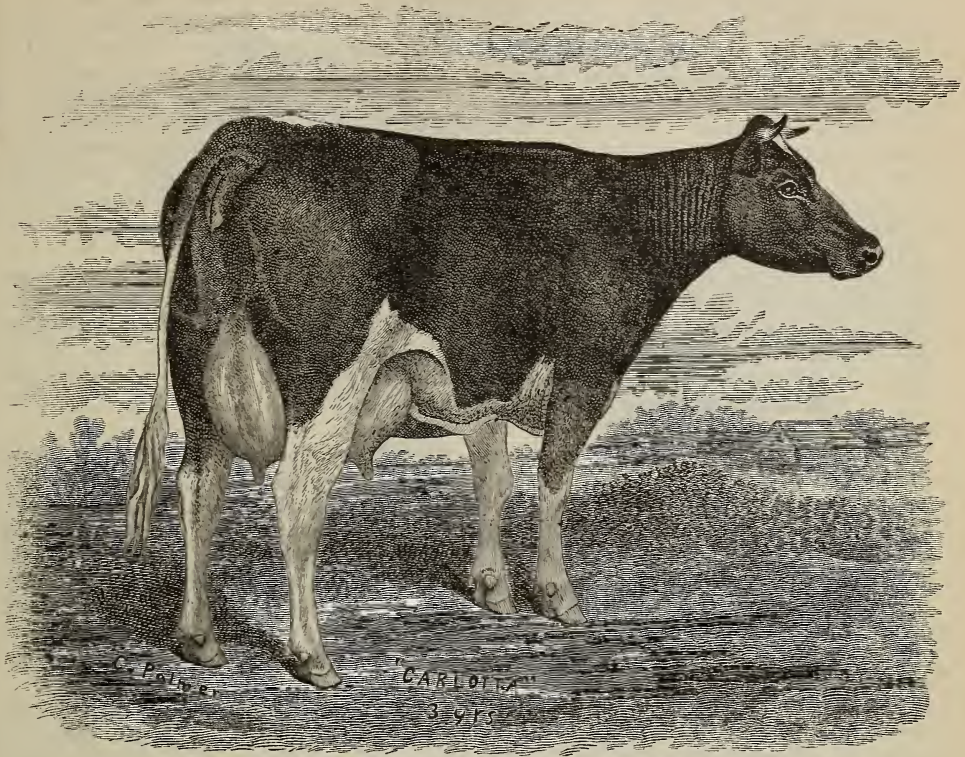
Mayor Beatty, the organ builder, of Washington, New Jersey, celebrated his 35th birthday on the 14th ult. The mayor, though still young, has accomplished more than falls to the lot of any one man in a million, in a life-time, and it is not too much to say that his name will pass down to history enrolled with Vanderbilt, Gould, Garrett, Sage, and others of the most successful business men of our times.

The Agricultural College.

This institution is undergoing a thorough over-hauling. The main building is being entirely renovated, by repairs, painting and white-wash. The dormitory and sleeping rooms are to be refurnished with bedding and bedsteads and all necessary furniture, and everything done for the comfort and health of the in-coming students, that the energy and thoughtfulness of President Smith can accomplish.

"BUCHU-PAIBA."

Quick, complete cure, all annoying Kidney, Bladder and Urinary Diseases. \$1 Druggists



LIVE STOCK REGISTER.

Holstein Cow.

Carlotta, H. H. B., No. 1266, owned by Smiths & Powell, imported in October, 1880. As a two-year old, Carlotta gave 35 lbs. 14 oz. of milk in one day; 1018 lbs. in one month, and 7227 lbs. 10 oz. in 10½ months. As a three-year old she gave 57 lbs. 8 oz. in one day, 1637 lbs. 8 oz. in one month, 7824 lbs. 14 oz. in six months, and 11,886 lbs. 4 oz. in one year. In 1881, Carlotta won the first prize at the New York State Fair, as a 2-year old, and was one of the herd that won the gold medal in 1882. In the same herd with Carlotta are now about 500 head of pure-bred Holsteins, nearly 300 have been imported this season. All are choice, and taken altogether, the largest and finest herd of Holsteins in America.

SHEEP.

BREED UP.—Do your sheep shear as much wool and as good wool as anybody else's sheep? If not, why keep them? We are supposing, of course, that your care of the flock is all right. If the care is defective, it will not matter how poor the sheep naturally are. But if you are bestowing good care upon sheep that shear lightly or shear inferior wool, what is the explanation for so doing? There need be no more care if the sheep were good ones; it would require no more feed for good ones, and it would not cost very much more to get a good sheep than it does to get a poor one. What is wanted is a sheep of good size, heavy fleece and good wool. How can it be had? If the question were asked how to produce any other animal, with certain well defined characteristics, we should reply; select at least the sire having these characteristics, and it would be better yet if we could get a dam having them. But we certainly should use rams that are just like what we would like

what we would like to have. There is no profit in using poor rams. Sheep husbandry with inferior rams is a losing business every time. Nobody ever yet made anything by the use of such an animal and nobody ever will. They are cheaper than good rams, and they ought to be, for they are dear at any price. There are plenty of good rams that may be had at a reasonable price and no false ideas of economy should prevent us from getting them. We keep sheep for the profit of the thing, and why not get all the profit there is in the business when properly managed.—*Western Rural*.

Shropshire Downs.

Combining as they do a heavy carcass of choice mutton with a fleece of good weight and of that fine medium staple that never goes out of favor, the Shropshire Down sheep are rapidly rising in popularity with American breeders. They are vigorous, hardy, and stand close herding in large flocks without loss of size or stamina; the ewes are careful mothers and good nurses, yielding plenty of milk; they are prolific, flocks frequently producing 40 per cent of twins; they are hearty feeders and have unusually great powers of assimilation of food, therefore they attain great weights at an early age; yet they will kill well, giving a large proportion of choice meat. The quality of their flesh is such that if it could be generally introduced to our markets, its use would quickly banish the prejudice so many Americans have against mutton.

Almost a century has passed since the foundations of the Shropshire Down breed were laid by crossing the Cotswolds and the Leicester on the original stock found on Morse Common, a tract of some 600,000 acres in England. The original sheep had horns, and brown or black faces. The horns they have lost, but the brown faces they have retained, and the legs are dark gray. In those parts of America where wool alone is the object for which the flock is kept, the Shropshires will be found profitable; where both wool and mutton find ready market, it may be doubted if a better breed can be kept.

Importations of Shropshires to America are increasing in volume and in frequency. There are in the vicinity of Chicago a

number of flocks of much merit, and other flocks are scattered through the country from Canada to Texas. For the good of a land which, in the first seven months of this year paid more than \$40,000,000 to other countries for wool and woolen goods, it is to be hoped that every reasonable effort will be made to extend a knowledge of the characteristics of this breed, and to impress its value upon the minds of our people.

Breeders of Shropshires in America are thinking of taking measures for opening a register in which, under proper regulations as to proof of pure breeding, etc., Shropshires in America may be entered.—*Midland Farmer*.

Great Fecundity of Five Shropshire Sheep

I notice that Mr. Price, of Herefordshire, England, had five ewes the past spring which dropped sixteen lambs, all strong and healthy. For several years previously he has had thirteen lambs from five ewes. The ewe that brought four lambs was only two years old, and these were her first. Mr. Price has also had this year twenty-five lambs from ten ewes.

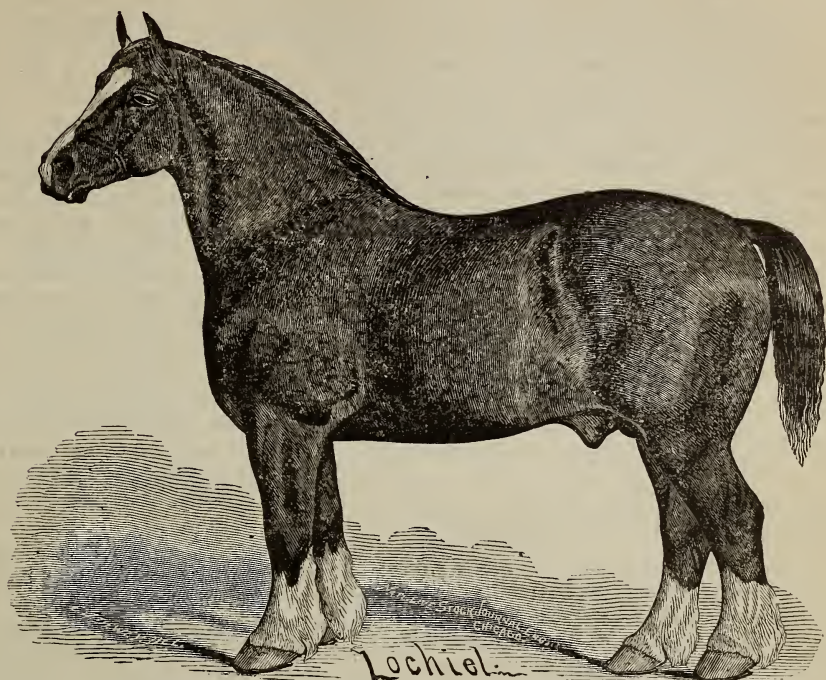
At this rate of breeding, even with only a few ewes to begin with, an owner of Shropshires would soon obtain a large flock. These sheep seem to be taking a foremost rank for fecundity, hardiness, thrift and mutton. Our own breeders do well to import them now in considerable numbers, as likely to be among the best paying sort, for a moderate quality of wool and a superior quality of mutton.—A. B. ALLEN, in *National Live Stock Journal*.

Publications Received.

COMMERCIAL RELATIONS OF THE UNITED STATES—Being reports of the United States Consuls, on the commerce, manufactures, &c., of the various consular districts in foreign countries. A valuable document.

HOUGHTON FARM REPORT on Diseases of Plants, by D. P. Penhallow, B. S. Referred to in previous number of the FARMER.

GENERAL INDEX and Supplement to the nine reports of insects of Missouri, by Charles V. Riley, M. A., Ph. D., of the United States Entomological Commission. A very useful compendium or index.



"LOCHIEL," a Clydesdale stallion, owned and imported by Messrs. Powell Brothers, of Springboro, Crawford County, Pa.

WE are enabled to give another fine illustration from the superior stock of horses that are to be seen at "Shadeland," the beautiful breeding estate of the Messrs. Powell, who are daily expecting two more large shipments, and others to follow, by which their present immense stock will be further increased. We call attention to their advertisement in this number of the MARYLAND FARMER. The subject of the present illustration is a beautiful and very stylish Clydesdale, of handsome brown color and good action.

♦♦♦ The Growth of Colts.

In the general horse markets of this country, nothing is so great a disparagement to a ready sale as the want of size. No matter how powerfully the horse may be built, with a strong body on short limbs, no matter how much capacity he may have for digestion and work, if he is small, he brings only a meagre price, and is led

away with the contemptuous opinion that he is only a pony. Like the nubbin in the corn crip, he is estimated to be of very little value. The attainment of size is the labor of scientific breeding and generous nourishment. Undoubtedly the law that "Like produces like, or the likeness of some ancestor" refers as much to size as to form, color, temperament and action, and the successful effort to change a law is the gradual result of long-continued crossing and treatment. Both the sire and the dam should be as perfect specimens as can be found, in size as well as in general proportions. Nothing deteriorates horse progeny so much as the selection of unsound and manifestly imperfect parents. Public policy should demand the passage of statutory prohibitions in every State of the Union against breeding from unsound and weedy sires and dams. If such legal disabilities had been applied when the Government was formed, the average horses of this country would have been advanced many generations over their present state of perfection.

Our farmers, and breeders of horse stock generally, should make it a special point to exclude from the harems dwarfed stallions and diminutive mares. Then they should give heed to the proper care and feeding of the colts during the years of their more rapid growth, and they would not only benefit themselves pecuniarily, but would contribute to the permanent value of the horse stock of this country in the future ages.—*National Live Stock Journal*.

For the Maryland Farmer.

Inoculation as a Preventative Measure in Pleuro-Pneumonia Contagiosa.

By Dr. Robert Ward, F. R. C. V. S., State Veterinarian, of Maryland.

Following up my article on the above subject in your July number, I will proceed to explain as briefly as possible the changes brought about by inoculation, thus to lead your interested readers to follow me as I proceed. It must be understood that *inoculation* does not produce *pleuro-pneumonia*, but, the introduction of the specific *virus* into the system of animals, exposed or likely to be exposed to this contagious disease, acts as a prophylactic, that is, a preventative to the action of the virus of lung plague when introduced by exposure to contagion. The exudate from the diseased lung, having been introduced into the blood of an animal, so changes the vital fluid that the *contagious element* loses its virulent power on the animal properly inoculated.

In vaccination for small pox, the disease is not developed by the *operation*, but a change is produced in the vital fluid whereby the contagious *element* of small pox is rendered inert. Now, this has been proved to such conclusiveness, that all countries institute *vaccination* as *compulsory*, and justly so.

Therefore, from these facts, I am held to advance inoculation for lung plague as a prophylactic measure, *one* subject of national importance.

The *modus operandi* is thus: A herd of cows to be operated on should be placed in sheds for a day previous and fed on soft succulent diet. The operator should be careful to observe that each animal is

healthy by testing the temperature, auscultating the lungs and the heart, being satisfied that all is correct, he produces a pair of scissors and clips the hair of the end of the tail, about two inches or so from the end, to two inches upwards and around; being furnished with an inoculation needle, holding a piece of stout white darning cotton, saturated in the lung exudate, prepared by being treated with a slight quantity of carbolic acid, but as the selection of the exudate requires some care, I will leave this explanation for another chapter. He passes the needle under the skin, upwards, and having covered about one-and-a half to two inches, he allows his needle to come out, and draws the saturated Seton cotton into the aperture; he then cuts it off and leaves it inserted.—Giving most stringent orders that no animal shall be struck or bruised; he then retires.

In the course of a few days there may be found some tumefaction about the part, but this is the result of the operation, so need not produce alarm. About the ninth day an exudation will be found around the part, that is to say, an exudate like that issuing from a freshly cut cucumber, now, as soon as this is observed, the operation of inoculation is complete, and the operator proceeds to remove the end of the tail, taking away the end of it just above the tumefaction, and he applies the actual cautery lightly to the part; the giving orders that the animal must still be kindly treated for a few days, he retires and the operation is ended.

Now I have mentioned as briefly as possible the general *modus operandi* to show that, like vaccination in small pox, the operation is a simple one, and I claim for it the same value as that accorded to vaccination in the human subject.

To be resumed in your next.

Catalogues Received.

FROM R. H. Haines, Moorestown, N. J., wholesale catalogue of small fruits.

FROM Franklin Davis & Co, Richmond and Baltimore nurseries, fruit trees, vines and plants, fully described and illustrated

Ellwanger & Barry's descriptive catalogue of Strawberries and other small fruits, at Mount Hope Nurseries, Rochester, N. Y.

F. M. Churchman and Geo. Jackson, Proprietors of Beech Grove, Marion Co, Ind. Catalogue of Jersey Cattle.

LADIES' DEPARTMENT.

Chats with the Ladies for September

BY PATUXENT PLANTER.

SEPTEMBER.

- "The golden rod is yellow;
The corn is turning brown;
The trees in apple orchards
With fruit are bending down.
- "The gentian's bluest fringes
Are curling in the sun;
In dusty pods the milkweed
Its hidden silk has spun.
- "The sedges flaunt their harvest,
In every meadow nook;
And asters by the brook-side
Make asters in the brook.
- "From dewy lanes at morning
The grapes' sweet odors rise;
At noon the roads all flutter
With yellow butterflies.
- "By all these lovely tokens
September days are here,
With summer's best of weather
And autumn's best of cheer.
- "But none of all this beauty
Which floods the earth and air.
Is unto me the secret
Which makes September fair.
- "'Tis a thing which I remember,
To name it thrills me yet,
One day of one September
I never can forget."

As the poet says so truthfully, "one day, the first day of one September, I *never* can forget," for it was my blessed, happy marriage day. Does anybody ever forget their marriage day? Oh! that dawn of a long life of connubial bliss is indelibly printed on the tablet of each human heart and often proves to be the bright star of the past, that guides safely when the storms and troubles of life are so terrible that our ship is in danger of sinking. Amid all the vicissitudes of human existence, however gloomy or bright, the joys and hopes of our marriage day should *ne'er* be forgot.

This beautiful month seems to compel me again to urge upon young ladies the importance of *early rising*, for the sake of their health and the enjoyment of nature in the early hours of September days, and to ask them to read, reflect and practice what an old poet sings:

- "Myrtilla, early on the lawn
Steals roses from the blushing dawn;
But when Myrtilla sleeps till ten
Aurora steals them back again."

But we will stop this bandinage and again return if you please to the subject we have lately discussed. To the higher education of women in the languages, arts and sciences. I insist that attention should be given in the school as well as at home, to those other necessary domestic duties that glorify the most learned and accom-

plished, for without them, woman is only a pretty, costly doll.

Among some things connected with cooking is the art of pickling and preserving. As this is the season for its practice, I mention these two branches of the culinary art as essentially necessary to be learned by every girl who is fitting herself for future happiness in the higher walks of life or in the humbler sphere. It is in this line that her studies in natural philosophy and chemistry may greatly assist her in the practical application of scientific truths. But, remember, a woman may be a good chemist and then not be able to make a decent pickle. Practice is necessary, and in that, well may be utilized all the help which the sciences can give. You see, while I admit the propriety of so-called higher education for woman, I insist that it is nothing unless united with actual practical knowledge, which, though humble, yet is absolutely necessary. To illustrate the value of such domestic knowledge, I refer to some recent notable instances.

A Boston woman, the daughter of a once wealthy man, being reduced to the necessity of providing for her own wants, resolved to manufacture pickles and preserves for the market. She told her friends and they promised to become customers. She found no difficulty in selling all she could make with her own hands. The next year, she enlarged the business, and the third she expanded it still further, her condiments having by this time acquired a reputation in the market. Now she is making a net profit of about \$10,000 a year.

Another lady, in the country, near New York city, born in the lap of luxury and bred up among the extravagant leaders of fashion, was suddenly reduced to poverty by the failure of her father. The wolf was for a long time howling at the door of a poor tenement, and the extremity of the occasion required that she should make some effort. Her smattering in the languages and 'ologies, and in physical accomplishments like dancing, music and drawing, were of too trifling a nature, and had been mastered too little to avail her as a teacher capable of imparting any of these acquirements to others, and she was therefore debarred from *teaching*, the last, unthankful and ill-requited resort of many a poor, impractical girl. In this whirlpool of despair, she suddenly remembered how, when a little girl, she rejoiced in making and baking, "all by herself," cakes, and how her parents smiled and praised her successful work. Since

then she had learned something of chemistry, and had made some progress in drawing various designs for china painting, embroidery, etc., why should she not try cake making in its highest and most artistic style. She began by small degrees and solicited trial of her work and orders from a few of her former acquaintances. They tried, tasted and begun from *charity* to order from her, "for she was poor and wanted help,"—(truly,) because it was found to be richer, and *cheaper* than could be had from a fashionable confectioner. Soon she was called on for wedding cakes, and cakes suitable in design for other occasions. Here her former knowledge of and talent for drawing and designing came into play in arranging the ornamentation of the icing and candied superstructures to surmount her cakes. The would-be aesthetical "*money bags*" saw and appreciated, or thought they did, the great worth and superior beauty of her work over that of others, and therefore gave her their patronage. In a short time she found herself at the head—sole directress of a large bakery, and the recipient of a fine income, surrounded by all the elegant comforts of refined life, and her former troop of friends returned with renewed zeal to their "*always best loved darling*."

In this simple history there are several glaring truths to be noticed. The great moral is too notable to be pointed out. One thing about both these young ladies, that should be observed is, the lost time, the great amount of mental anguish which was endured before their happy second thoughts told them what would bring them better days. Had they been educated at their school to mingle these useful industries with their book learning, that if misfortune should ever come they might look to such light work for a comfortable support, they would have at once resorted to those sources of supply and lost no time in grieving over spilled milk.

In the course of my general reading I came across the following sensible paragraph which I commend to the serious reflection of my fair friends—It seems to fall in precisely with my views, therefore I append it and ask that it be taken as a part of my Chat for this month.

"A good wife should endeavor to become a good cook. We do not mean that she should actually do her cooking, but that she should know *how*. We would have all young ladies trained into a respect for the cooking art, and into a reverence for the grand institution of dinner. The use of the globes is all very well, but on the whole, we prefer for womanhood the use of the rolling-pin. The pivot around which domestic happiness revolves is planted in the very centre of the dining table. A lack of instruction in the art of cooking is the great defect in modern female education. There are thousands of ladies who are perfect in all the accomplishments, who are high priestesses at the altars of "culture," who would be reduced to a most humiliating confusion if placed in circumstances that made it necessary for them to try their hands at cooking a mutton chop! If you were compelled to eat that chop you would certainly say that although God sent the meat, the cook came from quite a contrary direction."

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Kendall's Spavin Cure is used from the Atlantic to the Pacific coast.

CURVATURE OF THE SPINE, of four years standing, the patient could neither move nor walk, cured by the use of Stonebraker's Liniment. 25 cents.